Computer Systems

iARB . . . Made a surprise exit.

'savaged" by users' moves to in-

house microcomputers — and

sion, because short-term debts far

outweigh assets. But as the services industry walks this survival tightrope it is showing "remarkable resilience" to the received

profit potential.

Three of the 60 companies were

making losses in 1978. By the end of 1981 the number had grown to 10 - six of them bureaux. "Com-

panies heavily committed to processing services will definitely

WATCH out for a number of small but successful software houses,

LINE NOISE

Thursday, February 24, 1983







Bureaux battle on

by John Kavanagh
COMPUTER bureaux have been expansion of in-house processing

other services firms could be at risk if sales fall further in the recession, because short terms of 29.3% in the first bales.

with micros," says the report.

is falling. Sales rose by an average of 29.3% in the first half of the

three-year period and by only

against the micro

Top jobs switch at Microsoft

by George Black TOP microsoftware supplier Microsoft is shaking out its European operation, as it lines up to compete with fellow-American Digital Research.

The MS-DOS operating system

developer has replaced one of its key men on this side of the Atlantic, Chris Gare, with an ex-Commodore man, David Fraser. Fraser becomes general manager, UK, and Gare's post, director of European marketing, vanishes. Fraser suggested Gare could be given a subaidiary role to international director Scott Oki, but informed opinion hints Garage formed opinion hints Gare may have left the company after being ousted from the hot seat, only

eight months after joining.
Fraser, who was Commodore's UK sales manager until Microsoft

Computerplan hit problems last autumn and formed a subsidiary, Computerplan Software Services,

to take over its software packages

and 10 staff. Software de-

velopment costs put Compu-terplan in trouble and it went un-

der this month when the Customs

firm's Berkhamstead base las week, after Gare's surprise exit.

The move is part of a reorganisation started by Jim Towne, ex-Tektronix vice-president brought in as president and chief operating officer last autumn.

Microsoft Europe is now split into British, French and German companies with distributorships for other European companies.
Fraser's new opposite numbers,
Bernard Bergnes in Paris and Joachim Familia Munich and chim Kempin in Munich, are said to be recruiting heavily. This mirrors developments in the rival 16-bit camp of Digital Research, the MP/M-86 designer, which is also opening French and German branches and following Microsoft into Iapan.

Microsoft had trouble last spring appointing a top European salesman. An attempt to attract a headhunted him, took up his appointment as general manager for Britain and Scandinavia at the salesman. An attempt to attract a said s senior Intel executive came to in M nothing. David Lowe, taken on July.

and seek City investment in the

summer to pay off its debts.

Six of the staff, led by finance director Thomas Donahue, are now preparing to buy Computerplan Software Services and the products from the receiver. But Brown is not included in Donahue's plans.

hue's plans.
"We wouldn't need him as a

summer to pay off its debts.

by John Kavanagh

A MAJOR shake-up is in the offing at the top of troubled Data General software house Computerplan — and owner and managers. Other creditors, June 1984 and Excise refused to wait for the subsidiary to get on its feet and sack City investment in the

from ACT Microsoft, quickly left for Intelligence (UK). Then in June the firm appointed Gare, a torola product manager.

Microsoft products had done well in the UK, largely due to Texan Bob O'Rear, international accounts manager, who had been on the team from early days. But in Continental Europe they fared less well. Fraser's task is to strengthen Microsoft's attack on the European market.

Meanwhile in the other 16-bit camp Digital Research is undergoing a mirror-image transfor-mation. Its CP/M-86 operating system has found its way on to a considerable number of micros, including IBM, DEC, Data General and ICL. A European HQ opened in Newbury last December.

European director Paul Bailey said smaller branches would open in Munich in April and Paris in Computerplan MD to quit

tion so we all do a bit of every-

thing. George has great marketing flair - but even so we don't need

him as a consultant part-time".

Meanwhile Brown is talking to

fast-growing services group

tures. These could involve the

transfer of Computerplan packages to 16-bit microcomputers running

the Unix operating system.

full-time. I see us employing

about future ven-

Britain have received Davy's qua-tionnaire on which computers they full-time managing director," said Donahue. "I'm now running the company but we're a small opera-

pected to be published by about

answers are coming in from but companies and individuals.

A Davy spokesman said it was still too early to generalise on the results, but some surprising appliations were already coming ight. "In some cases people een to use very simple gear for we sophisticated purposes," he said, A summary of the results is a

the end of May, from which it hoped to be able to identify treats. Turn to Back Page

Davy digs for information that the Dol doesn't know

by George Black
A PRIVATE computing firm is
having to carry out its own surey
on the engineering industry's us
of computers because the Department of Industry cannot provide

the information it wants.

The project, undertaken by Sheffield engineering companing specialist Davy Computing, is intended to assess which way the market is going and to help Day size up its computing.

market is going and to help LNy size up its competitors.

A Dol spokesman admitted the although it would hold some is formation on the subject it would not be in collated form. "We don't not be in collated form. "We don't do any detailed surveys of our one because we don't have the it. sources,' explained the spokesman. "In any case we call not provide such details on repost because the information wall have been given to us in cost dence."

Legislating the provide such details on repost to the provide such details on repost to the provide such descent of the provide such details on repost to the provide such details on the provide such details of the provide such details on the provide such details on the pro

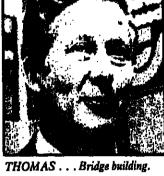
by for sweeping changes at the blicky-funded British Tech-clogy Group by retiring as chair-an nine months early. More than 40,000 engineers is The new role for the group is to be announced in the next weeks, It will bring a shift

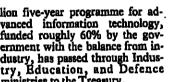
happy they are with their systems.

Replies are being fed into Dry's Univac 1100 mainfrant is batches. Every British engineering company with more than 20 mployees has been approached. The answers are coming in fear but

National Research Derelopment Corporation, which was needed with the NEB in 1981. that merger saw the birth of the dritish Technology Group. Sir freddie had been the corporation's

spected to be the promotion of K technology overseas. This has the tried already through the stional Enterprise Board's ill-led software marketing sub-





A final version is expected on Prime Minister Thatcher's desk

the report back to Jenkin.

It will then become apparent how much success Jenkin and Baker have had in convincing Thatcher of the national importance of government action to direct the marketplace.

the party line.

Opinions were divided on whether the matter would be handled in next week's Budget. FAIRBAIRN . . . Political faith.

TENKIN . . . Out on a limb?

the National Computing Centre's head, David Fairbairn, and Ted Cluff of the Institute of Data sidered in isolation. Without a strong manufacturing industry to buy its products, the Alvey project will be money wasted. Despite Processing Management.
Fairbairn said it still seemed to Baker's efforts I still don't think be an article of political faith with the message has got across.

"I'm pretty pessimistic. What we want is millions of users, not to the government not to intervene concentrate on research by a few "The public sector has to be university scientists.

induced to buy the new products, not to be fied down by short-term This was echoed by Ferranti's Wilf Robinson, director-general of cost-justification," he said. He pinpointed the British weakthe Buropean Information Tech-nology Organisation, a grouping of 15 UK high technology comness as being the rate of take-up of new products. "Therefore we should give even more emphasis to panies, who said, "We must en-sure that the market is primed and market research than do our com-petitors," he said.

Cluff saw a danger that the whole project could turn out to be not forget that the final objective is to create exports and counter im ports. All we are asking for is the same treatment form government etical, and added that Alas if we were American or Japanese vey had not been allowed by his

And Peter Thomas of Pactel,

Magnuson files for court protection

MAGNUSON Computer Systems, the maker of IBM 4300 lookalike computers, has filed for court protection from its creditors under Chapter Eleven of the US bankruptcy code. Company president Charles Strauch said Magnuson had been very badly hit by IBM prices in late 1982.

In 1982 Magnuson made a loss of \$21.6 million on sales of only \$18.4 million. But the fourth quarter provided a profit of \$1.4 m.

Eagle flies again

THE 150 computer_staff at in surance company Eagle Star's computer headquarters in Cheltenham have suspended their work to rule, which is in sympathy with a 121/2% pay claim by 5,000 clerical staff, for the duration of negotiations with the government conciliation service ACAS.

BT new service

BRITISH Telecom has set up a new division called Telecom Tan to run computer-based telephone answering services from a centre in Bristol. The call management system displays information to the operator on the company or person whose calls are being answered.

ICL backs MSc

ICL is collaborating with the Science and Engineering Research Council and Kingston Polytechnic to set up a new MSc course in Information Systems Design, in the School of Blectrical and Blectronics Engineering at

Datapoint launch



Industry leaders go to market on Alvey

Thursday, March 10, 1983 Number 850 35p



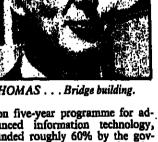
by George Black TOP figures in the computer world have been meeting senior government officials to argue that support is needed to create a network for the distribution of technology. That, and the need to con-centrate on "added value", is as vital as the background research and development on a fifth genera-

tion project, they say.

The push by industry leaders for the government to give financial support to the marketing of products, as opposed to just R&D, comes as a decision on the Alvey

Committee's proposals nears.
But there is widespread scepticism whether Industry Secretary Patrick Jenkin and Information Technology Minister Kenneth Baker will be able to persuade the Prime Minister to go far enough towards intervention in the market to make Alvey a success.

Alvey's proposals for a £350 mil-

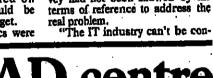


vanced information technology, funded roughly 60% by the gov-ernment with the balance from industry, has passed through Indus-try, Education, and Defence nistries to the Treasury.

this week unless the Treasury balks, or the Cabinet Office bats

it a test of political wills, with Jen-kin and Baker out on a limb from

Chief among the sceptics were



LOCAL network specialist Data-point has released a Z80-based eight-bit micro to fill out the low

outweigh assets. But as the services industry walks this survival tightrope it is showing "remarkable resilience" to the recession. These are the conclusions of a study of 60 companies results between 1978 and the end of 1981 by the UK research firm ICC Business Ratios.* The study report says that despite the dangers the services industry has "tremendous profit potential". CL sticks with 8-bit months of the study period and by 10.3% in the second. Meanwhile profit margins fell from 6.8% in 1978 to 5.3% in 1981. tor micros

oy Robert Parry

* Computer Services Industry Sector Analysic, £105, ICC Business Resios, 28-42 Banner Street, London ECLY SQE. IT IS still an eight-bit micro world at ICL — for this year anyway.

The new clutch of personal computers hatched by ICL last week remains centred around the Intel 8085 microprocessor, though a 16-bit option is promised for the sum-

THE grentlins seem to have struck at IBM's new operating regime MVS/XA. Scheduled for first quarter 1983 and widely tipped for January, it now seems that it could be mid-March before MVS/XA is widely available. Just why this should be cannot be gauged — certainly not through lack of performance though. Early reports from the myriad test sites around the world indicate a high level of user satisfaction. mer.
"We wrestled with the problem
of whether to go straight to a 16-bit
machine," said office systems
business manager Roger Hill, "but
the dealers said "Why worry? The being stretched to provide a worldwide service to a booming market via a spelication software is still on relatively in payroll, deciding to raise the necessary cash by going public. We have reason to believe that high up on this list could be the CIS Cobol and Level II Cobol people Micro Focus.

THE sags of Commodore's UK production plant continues; Negotiations between Commodore and the Department of Industry over the another fortnight at least before anything is settled. Commodore wants to start assembling minis here by July, and has fixed on one of two Buterfavoured location.

KEEP your eye out for top American businessman's magazine Fortune when it his the stands on March 7. For it reveals that in August, 1981, IBM signed an agreement with the FBI to train and provide cover for two agents and to ICL is placing recess.

KBEP your eye out for top American businessman's magazine Fortune when it hits the stands on March 7. For it reveals that in August, 1981, IBM signed an agreement with the FBI to train and provide cover for two agents and to train others. The agreement was signed only a month before Hitachi's leading US consultant, Maxwell Paley, accepted a substantial payment from IBM for information which led to Hitachi going to court, and pleading guilty, for stealing trade secrets. This tale is bound to cause some stir as Paley was paid over \$2 million by Hitachi over the years, it is alleged.

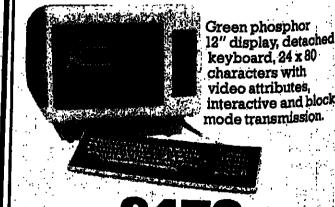


HILL., . Staying with 8-bit.

business software suite sold by ICL label as ICL Hi-Line. Like the Personal Computer hardware, Hi-Line is sold through the ICL Trader Points, along with MicroPro word processing and spreadsheet programs, Digital Research CP/M and MP/M operating systems and Microsoft languages. systems and Microsoft languages. All these are supported by ICL.

The new models are all variants on the basic eight-bit theme, but with different memory and mass storage capacities. Multi-user operation, with up to four screens, is available on all of them, with The Table 1981.





£472

Ar. but Hill does and DOS ''It depends what aches on in the European mar acet. It is placing most emphasis on the 'new models' improved performance over the early Personal Computer within stopped being built is east at a place of the Rair although the new models are packaged differently from the Rair Black Box Phose of the Rair although the Rair Black Box Phose Ocherne CO3 Recticable mark from Items (14) Observe Pack Cocherne CO3 Recticable mark from Items (14) Observe Pack Cocherne CO3 01-836 692

ICL seeks a share in CAD centre systems house Compeda from 150 to 60 following a takeover last December, must give cause for Andrew Thomas Li Confirmed this week that it must a stake in the Cambridge AD Centre, scheduled for privapation by the end of this month. it's a target," ICL put its cards on the table with the statement that "ICL will government for the sale could be missed. Hambros Bank, which is

bu it may face stiff competition ICL says it intends to become a sareholder in the Centre as part of

consortium made up of engi-tering companies and venture capitalists. At the same time there is evidence that Prime may be stading a rival consortium aimed

etory in Scotland 3

handling negotiations for the DoI, has not yet sent copies of the terms of the sale to the interested parties. Jeremy Harboard of Hambros said: "There are quite a few in-

terested parties, and we are looking at a number of companies at the moment. We would hope to get all of them informed (of the terms) soon, but whether that will be this week, I couldn't say. The end of March date isn't a deadline;

be a shareholder, but not a major one, and we want the ICL staff to have continuity of service and past service rights carried over the sale."
All but six of the 150 CAD

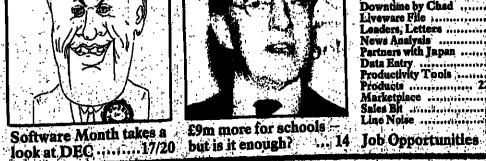
Centre staff are ICL employees, and although the Dol stated in January that redundancies were unlikely, the possibility of a takeover by Prime, which has re-duced the workforce of CAD keover this week.

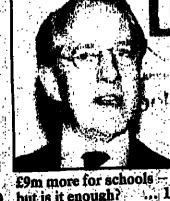
CAD Centre financial controller

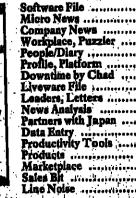
Brian Picton gave credence to the Prime consortium rumours this week, "There are certain people that ICL wouldn't want to join a consortium with," he said. "There may well be more than one consortium trying to buy us."

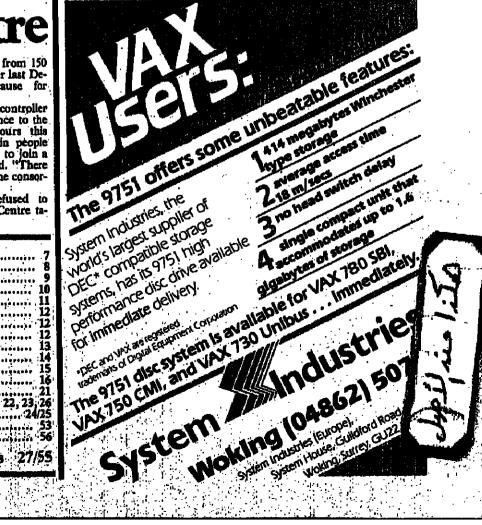












DEC cool to 32-bit challenge

These developments come just a

These developments come just a way for a long the week after Data General claimed that it had leapfrogged other minicomputer firms with its new 32-bit Eclipse MV/10000.

But DEC UK marketing manager Bill Passmore said this week that the company was "not concerned" by Data General's claims.

"You can build a faster raw way for a long to extend the range with products were coded the performent that the company was "not concerned" by Data General's claims.

"You can build a faster raw had leaked out.

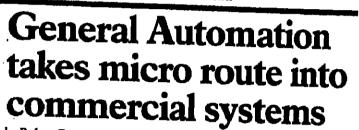
THE 32-bit minicomputer market has been given something to think about with the launch by Perkin-Elmer of a system which links up to ten 32-bit processors over a common memory bus. At the same time Digital Equipment has confirmed that it is working on 32-bit machines at the top and bottom of its Vax range which will "far exceed" existing products in personal controllers and soon of the only thing left from the original launch will be the processors are linked to a common the original launch will be the processors are linked to a common to the only thing left from the original launch will be the processors. The system is controlled by a 3250 and nine modified 3230s can be added. The processors are linked to a common to the only thing left from the original launch will be the processors. The system is controlled by a 3250 and nine modified 3230s can be added. The processors are linked to a common to the only thing left from the original launch will be the processors are linked to a common to the only thing left from the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors. The system is controlled by a 3250 and nine the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processors are linked to a common to the original launch will be the processor are linked to a common to the original launch will be the processor are linked to a common to the original launch will be the processor are linked to a common to the original launch will be the pr

ready announced," he said.
In the US a market commentator and DEC specialist, Sonny Monosson, said the products were a long way off, because no details

Passmore added that DEC had had several Vax projects under way for a long time. "We intend to extend the range up and down with products which will far exceed the performance of those already appounced." he said processing is done by the programmer. "If multiprocessing is Controller giant

Mascarenhas.

He said a 10-processor system gave the 3200MPS a throughput of 20 million instructions a second, taking the product well up into the mainframe and array processor opens UK office



ing system.

The industrial automation specialist has launched a range of multi-user micros based on the Motorola 16-bit micro running Xenix and Pick for its US-built Zebra

range.
"We've had good success in the
Pick marketplace with our Interactor 600 minis," says Bill Rice, GA

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21,010

£1,120

£1,335

£1,100

£975

£900

£16,150

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DRE 8820's

TI-781 RO's

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second user.

TI-745's with ASCI

by Robert Parry
MINI-MAKER General Automation is to use micros to break into the control of the tion is to use micros to break into the commercial systems market and is betting on the Pick operating system.

The industrial automation specialist has launched a range of multi-user micros based on the commercials with the Insertic machines.

"Users can take application software from a desk-top microcomputer with two screens all the way up to a supermini with 60 screens," claims Rice. "The Pick operating system is gathering a lot of support now, and we will see higher sales of Pick Zebras than the Xenix versions at first, But there will probably be more Xenix sales than Pick in a year or so."

With the Zebras, GA is changing its stripes quite markedly. Previously its mainstream business was in industrial automation and OEM business. Now with systems offering industry standard commercial operating systems rather than GA proprietary ones, Rice sees in the Zebra range something that should hold GA for a couple of years.

years,
Development is centred on such systems for the time being, and the planned 32-bit supermini has been put off until 1984.

teractor machines.

A product is under way to speed up Pick operation using an extra processor working hand in hand with Zebra's 68000. This product will be called Vulture — because it aits on Zebra's back, says Rice.

General Automation is expanding its dealer network to core with

"Users can take application soft-

A product is under way to speed

of dealer boards Correspondent
THE government's drive to Correspondent
THE government's drive to liberalise telecommunications dominated the week's proceedings in Parliament. Under-Secretary of State for Industry John Butcher took the first steps to allow private companies to market the dealer took the first steps to allow private cattons committee that the government state of the dealer took the first steps to allow private cattons committee that the government of the same time, the Department of Industry has almost finished preparing a campaign to dissuade retailers from selling telecommunications equipment which is unsuitable for approval. Butcher took the first steps to allow private cattons committee that the government of Industry has almost finished preparing a campaign to dissuade retailers from selling telecommunications equipment which is unsuitable for approval. Butcher took the first steps to allow private communications dominated the week's proceedings in Parliament. told the Commons telecommuni-cations committee that the governtook the first steps to allow private companies to market the dealer boards used by money dealers to keep up-to-date with the world's foreign exchange markets.

Butcher told the Commons standing committee examining the Telecommunications Bill that four or five British companies have produced excellent innovative work and wish to have their equipment liberalised. ment believed that illicit supply of telephones and other apparatus should not continue without coun-

BARK . . . Aiming to bite a chunk of the UK controller market.

The Week in Parliament

Steps to free sales

ter-measures being taken. He said it was an offence to sell unmarked equipment. But partly because some people wanted to connect antique telephones to pri-

vate systems, unapproved equipment could be sold so long as it was marked as being unapproved.

But Butcher said he shared concern that such equipment should not some on to the general will be called Vulture — because it its on Zebra's back, says Rice.

General Automation is expanding its dealer network to cope with the smaller end users it hopes will be attracted by Zebra. Rice expects to have a dozen within the next two months, and expand to 30 or 40. Pirst deliveries of the machines will start around July.

He said he was anxious for this to happen because there were dealer boards in international market, and the government intended to mount a campaign independent of British Telecom's to make sure retailers had no doubt that selling unapproved.

But Butcher said he shared concern that such equipment intended to mount a campaign independent of British Telecom's to make sure retailers had no doubt that selling unapproved apparatus was a serious offence.

lakultura in jiener.



In the Lords, members to told that the Immigration Set Intelligence Unit had the named its computer of 300,000 per who had been refused that enter the UK, refused cate of the content of ance, had been deported, or we suspected of being involved abuse or attempted abuse of ion

Terms of circulation central Computer Weekly is sent free of charge is following categories in the UK only, care directors, company edorstance, managem service executives; chill servante response computer categories and computer computer

gration laws.
The disclosure came from Host
Office Junior Minister Lord Essin answer to a question from
Liberal peer Lord Avebury. In
computer records including nationality, age, address, and and or more of the other clearly and fined categories likely to spart But ethnic origin was not be cluded, Elton stressed.

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Contractions of the company

Full listin Olympia for finance launch by specialist IBM this

by Philip Hunter
FINANCIAL informs
specialist Datastream has a
will join its own dut by the
on to the stock market with
quotation. The listing was
because the major insult
owners, including the BG
group, Commercial Using
Prudential Assurance, which
release some of their sucother private investment summer by Kevan Pearson

IBM is set to clear the decks to
announce its 4300 successor, the
Olympia series, later this year.
According to one source the iniother private investment.

probably be made before September, will concentrate on the low end 4300 - the 4331 and 4321 There was no desire to the money for research or square to the way were got a fair bit of call have no need of money, and the sastroam company received. machines. And deliveries will start in the first quarter of 1984. But 4341 users may have to wait as the company is still pushing these machines hard and demand is heal-

Datastream decided to 6 the Unlisted Securius Market Unlisted Securius Market USM) set up by the State change in November 1980 to vide small companies with a sier and cheaper way of namoney by putting shares into a lic hands.

nis createry rules out the an-nouncement of the oft-rumoured "4351" which would have helped fill the gap between the top 4341 machines and the low end 3083. The Olympia series, when fully unveiled, will cover this entire per-There was no point going the USM, says Robinson at Datastream is a mature con formance range from the 4321 up to the 3083E.

with the successful five-years ing record required by the sale Exchange for a full listing.

The USM requires only at year trading history, and hear trading history, and hear toonal circumstances will discompany without a trading action sell shares on the strengt. The top models, which will probably overlap the 3083E at about 4 million instructions per second (mips), will also support MVS/XA, which IBM is shortly to put on general availability. But they will feature full air cooling, like the 4300 range, rather than the internal water cooling of the 308X beries. to sell shares on the strengt well researched feasible proper The USM requires a companielesse only 10% of its equit, stead of 25% for a full bring, a has already proved populs a many small young compute a panies looking for money to gran Datastream is well known to tential investors such as sociational investors and investors such as sociational investors and investors are considered.

The company is not expected to smounce the middle to top end machines in the new range because of the still heavy demand for the 4341, especially after last year's price cuts and performance exten-

June seems to be the bookies' favourite month for a major pro-

duct announcement.
This effectively rules out the an-



FULLER . . . "£100,000 a mips."

sion, And the company has a heavy backlog of orders for the 3083B and B models.

John Curran, Buropean marking director of National Advanced Systems, says he expects the top end Olympia machines to be priced at £325,000 to £350,000 which could have a big impact on 1083 orders. A basic 3083B costs of the price of the

CALL, believes that IBM will ad-us the price/performance of the agement stage to routine ma ance.

PSS will be expanded from 30 packet switching excha during the year and will be hanced by the addition of electronic mail service called F loo. This is based on G Telemail from the US, which is been running as a trial service with a schinks, is to announce them on light or fourth quarter of 1984. The difference is lawfuld minimise any 3083 is also the policy IBM sages in the 3083 is was put on the its difference of the policy IBM sages in the soles of the policy IBM sages in the soles was put on the service and impact on the services will be available on each of the perworks separately as soon as manufacturers put teletex terminals on the market.



BT counters Mercury by boosting data services

by Donald Kennett
BRITISH TELECOM plans a
major boost to the activities of its
National Networks division this year to meet the competition from Mercury Communications, which goes into service next month.

The division's specialised se vices group is geared to serve the business community and the changes are centred on the Kilostream and Megastream digital leased circuit services, the Packet Switch-Stream public data ne

work and the telex network.
Kilostream links, which supportransmission at data rates from 2.4K to 64 Kbits per second, are to be available in all main UK busi be available in all main UK business centres by the summer, offered on 30 days' delivery with most expected to be installed within 15 days. By the end of the year they will be available from 250 exchange buildings and by the end of next year from 400.

Major companies including Ford, Shell and Whitbread are already using Kilostream circuits.

ready using Kilostream circuits.

for complete turnkey network agement stage to routine mainten



FOSTER . . . Saw a hole in the market.

by Robert Parry BIRMINGHAM-BASED Applied micro, designed and built in the US by Chuck Peddle's Victor Technologies (ex-Sirius Systems Technology). It holds a teading position in the UK 16-bit micromarket, but as a distributor of Computer Techniques is going to its shareholders for £6 million to And the Department of Indus-try and Scottish Development Authority are putting up "several someone else's hardware, ACT has

build its own micros in Scotland.

tion scheduled for September.

We saw a hole in the market,"

Roger Foster, "but nothing to fill it in the US. We intend to meet

ACT's present success is based

to a large extent on the Sirius

no scope for export.

Project Apricot is intended to reduce ACT's dependence on products over whose manufacture it has no control, says chairman Lindsay Bury in the prospectus for the rights issue. It is also intended the summer with full-scale producthe rights issue. It is also intended to create the possibility for a substantial proportion of revenue to come from exports, ACT plans that half the output from the Glen-ACT estimates that total investment will reach £10 million by 1984, when it plans to produce 4,000 machines a month. The micro, codenamed Apricot, will be cheaper than ACT's Sirius. rothes factory will go to export

markets.

ACT has already discussed with Victor, with which it has close links through the Sirius, assembly of Apricot by Victor for the US. We see a very long-term relationship," says Foster, adding that it will not be just one way. Victor is known to be looking

shady, pending its official launch in June. It will be portable, weighing in at under 20 pounds, but not a briefcase fit like the Jap nese Epson machine.

family, presumably using the iAPX 186 chip which gives space and cost savings by integrating many peripheral functions on to the one chip.

Software will be compatible with that for the Sirius, but there

will also be a large chunk of purpose-written packages, integrating general business applications with word processing and graphics and sold as part and parcel of Apricot.

Apricot will use the 3½-inch Sony microfloppy drives, rather than Sirius's idiosyncratically formated 5¼-inch drives.



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ledger, its flexible report writers include a planning and

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Wagnerial York depressing

Olivetti woos US and jilts France

to the Italian giant's know-how in office suttemation, as well as its 40% stake in the company.

State strateholder, has therefore possible partners.

De Benedetti has been saying maker Cii-Honeywell Bull to that he is eager to extend Olivetti's Machines Bull, the holding com-40% stake in the company.

Olivetti's efforts to loosen its

French ties come at a moment when the Italian government is expressing interest in a stake in the Thomson-Brandt merger with Grundig whose outcome is still un-

certain. De Benedetti revealed his interest in an American alliance for Olivetti, as moves began to dissolve Olivetti's partnership with the French State-owned, com-

pany, Saint Gobain.
The French government has told Saint Gobain, which diversifled into electronics under orders from former President Valery Gis-

FORTUNE . . . Showing ability to deliver hardware application package,

\$40m office net order

Ray Fortune, Data General's vice-president for Hurope, announced the order last week and said: "This order shows our ability to deliver a hardware application package and illustrates our turnkey responsibility. It is our

these systems will be installed within the next 15 months."

onlice automator matter another chapter in the success story of the MV/4000 minimum.

Europe.

based on a two Mbyte Eclipse
MV/4000 32-bit minicomputer
with 147 Mbytes of storage, a 15
Mbyte cartridge tape drive and
two letter quality printers together
with between four and eight
workstations

General's commitment to the

According to Bill Cadogan, mar-keting manager for the UK and Ireland, over 100 orders for the

MV/4000 have been placed in

inched last November.

Data General wins

by John Riley
A TOP US stock brokerage firm,
E. F. Hutton, has placed a \$40
million order with Data General
for an integrated office network in
one of the largest office automation

300-400 integrated branch in-

formation processing systems based on Data General's Compre-hensive Electronic Office, Hach

system in the office network is

OLIVETTI chief Carlo de Benedetti is looking for an American partner, and the French government looks likely to lose its access to the Italian size of the Italian siz

cir-Alcatel, a subsidiary of another State-owned electronics major Compagnie Generale d'Electricite, has been instructed to negotiate for the purchase of Saint Gobain's 35% stake in Olivetti.

But de Benedetti is uneasy about remaining in harness with the French. His relations with Cii-Honeywell Bull's previous chair-man, Jean-Pierre Brule, were tense and no headway was made in launching a much discussed project for a joint venture into office

Georges Pebercau, Compagnie

access to the French market, but his priority is to establish a viable industrial partnership. The financial relationship must be on a scale in proportion to the industrial effort, he argues - a broad hint that Olivetti should share French State aid to computer makers.

This reflects his view that if CIT-Alcatel steps into Saint Go-bain's shoes, its stake in Olivetti must be much less than 40%. De Benedetti recently gave a

hint of his much greater enthusiasm for an American partnership when he told Fortune: "The prob-lem is to find a shareholder who will help us continue to expand."

by Robort Parry A WORLDWIDE network

supplying information on commodity price changes within seconds is spreading. Unicom News, London-based joint venture by United Press International (UPI) and Commodity News Service (CNS), is putting in new circuits to its

is putting in new circuits to its commodity futures trader clients

commodity futures trader clients at the rate of one or two a day, and is hoping to accelerate with its latest offering, Uniquote II.

This is a new intelligent terminal, microprocessor based, that allows clients to receive both Unicom's real-time commodity prices monitor and its news service through the one unit, while giving the user more flexibility in how the information is displayed on the acceen.

"We went for a broadcast net-work," says Unicom's director of technical services Martin Baker, "because it makes adding new clients very quick and easy. But it did mean we had to develop our

A TERNAGE team from Yeovil, Somerset has beaten Labour and Conservative politicians at running

the economy by using a computer

model,

The four boys, aged 16 to 19 have won a competition on Running the Economy sponsored jointly by Digital Equipment and the School of Economics and Politics at Kingston Polytechnic.

"We used a simple Keynesian model with just a slight tinge of monetarism," explained the team's leader Michael Jordan. "We checked out the program very

checked out the program very thoroughly first to see what could

ture, but kept the money supply well under control."

Highteen schools competed

against professional econom

government expendi-

Boys beat politicians

Terminal upgrade for

commodities network



"I give priority to an American stake holding because the US is a country which is conducting the technological development that really matters in our sector."

De Benedetti said he was prepared to leave part of Saint Go-bain's stake "in French hands".

own protocols, rather than being able to use standard ones."

There are very good network

management systems about, Baker

weil as politicians. The Conserva-tives came ninth, and Labour was 20th out of 21 contestants. The Yeovil boys got 4,233 points, while Labour MPs managed only 1,952.

level of training and after sales support offered, Courtney says.

Training, like the basic business software, is included in the system price. And hardware and software support will come through Hart itself, with each office having a complement of engineers, trainers and software people.

not us - we don't want to be one

Hart's aim is to come some-where between Tottenham Court

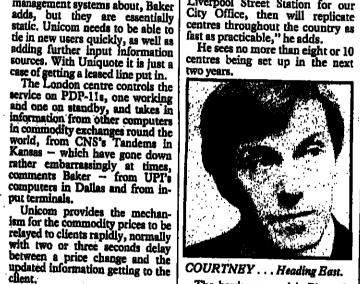
Road micro dealers and the large

multinational manufacturers in the

services

For the moment the only Hart office is in Ealing, West London, but Courtney intends to head East in a few months time. "We're ooking for somewhere around iverpool Street Station for our City Office, then will replicate entres throughout the country as ast as practicable," he adds. He sees no more than eight or 10

centres being set up in the next



COURTNBY ... Heading Bast.

The hardware used is Plessey's System 19, which achieves multi-user operation through giving each user a Z80 processor with 64K of RAM. All processor boards are leasted in the central waters her RAM. All processor boards are located in the central systems box, along with hard and floppy disc drives. As well as carrying the Plessey or Hart labels, the kit can be found elsewhere as the Logitek

Operating systems used are from the Digital Research CP/M stable, adding a wealth of off-the-shelf software to the packaged accounting, word processing and general business software included in the asking price. Multi-user operation comes through MP/M and CP/Net — tweaked by Hart so that it works, says Courtney. that it works, says Courtney.

System prices start at £15,000 On prescription ter disc package, rising to £42,000 for a 16 user, 35 Mbyte system. Hart has already sold two systems, worth around £33,000 altogether, somewhat earlier than planned. installation of systems will start in

SALES BRIEF micro shop to drugs firm

PHARMACEUTICAL supplier Macarthys has signed for a new million Sperry Univar 1962 multiprocessor system for in Reford headquarters. The new machine will replace Macardin existing installation of fire 903 mainframes. by Robert Parry
ONE-STOP micro shopping is the
carrot dangled by newcomer to the microcomputer market, Hart Computers. British hardware,

And in Germany, Frankfar University has ordered a 4 militar 1100/91 system which will form the basis of a network linking of leges in the Rhein-Main area. The initial network will support around 800 users, a number expected to grow significantly as the network

Pilot's aid

THE F-16 fighter aircraft is to be equipped with British head us displays in a deal worth £30 ml lion to Marconi Avionics. The General Dynamics plane will fe-ture a wide angle display along piloting, navigation and were aiming plus a TV picture of the scene ahead for night operation.

Fire control

THE UK's second largest fire by gade, Strathclyde, is to take a 12 million computer-based command and control system from IAL Gemini. The system is based on three Data General Eclipse

BT order

TWO million pounds worth of Newbury Data VDUs and mutin rinters are on their way to Roll will be used for BT's packet swith stream service, but the majory will aid the development of as applications throughout Britis Telecom.

Sweet deal

CAP is aiding the production of 200,000 tonnes of sugar a year in a turnkey deal with British Sugar. A supervisory control system worth £430,000 is to be installed at the BS Bury St Edmunds automated warehouse part of a complex which produces 40% of British Sugar annual production.

Vital modems

MICOM-BORER Micro 4000 PK dems are to form an integral part of Geac Computer's systems since at library applications. The first shipment of 4,800 baud modern a valued at over £200,000, and further orders are expected.

Geest in hospital

THE new £4 million Fitzwilliam
Hospital at Peterborough is to the
Geest Computer Services to handle
its staff payroll system. Geet elready handles over 120 payroll,
sales ledger and invoicing applications for firms in the Peterborough
area. and claims that its service. costs less than half the prior

es. EACH month, 12.5 criptions are issued, and Rediffi-sion Computers has won a £1.2 million contract to supply hardware and software to calcu payments to 4,000 pharmacis as to provide prescription snalyss over 900 GPs within the NHS.

to fill gap in Sperry sells to fill gap in Sperry sells £2m system Users slam govt over privacy Bill

vacy needs and quell public fears."

the Bill doesn't deal with privacy

but with the computer handling of data," said Gordon Cunningham,

represents the local govern-

EEC neighbours rather than to meet the public's privacy needs — and as a result the public's greatest

That is the view of the National Computer Users Forum, which represents 25 of the UK's leading computer users associations and other user groups. The forum has written to Home Office Minister David Waddington to express its

In its letter the group says although the privacy issue has been highlighted by the advent of com-puting it is a social rather than technological issue.

people would have power to sign

by John Kavanagh
THE government is pushing the Data Protection Bill through Parliament to keep in with the UK's limited to keep in with the UK's limited to keep in which the UK's limited to keep in which the UK's limited to keep in which the UK's limited to be at the heart of public concern," says the letter. "These exemptions may undermine the attempt the Bill makes to meet pri-

He added: "We feel the Bill will "We feel privacy is privacy and go through largely as it is because the EEC is coming to the end of its tether waiting for the UK to conform to the EEC convention. The impetus is coming from tradment computing consultancy LAMSAC on the forum. "Privacy ing considerations rather than

is not a computing issue but involves a far deeper social need. "As far as getting round the Bill is concerned it would be easy to Despite its comments the forum says it wants the Bill to get through. "Once the Bill is on the statute book, warts and all, we can strip names and addresses off a start to work on amendments to computer file and hold them on a

manual index, for example."

Cunningham also backed the view put by Labour's Lord Elwyn-Jones in the Lords that too many the Commons. The Home Office exemption certificates.

"The Bill says any minister or said the government hoped to get the Bill before the Commons as remove from legislative cover the ministerial representative can soon as possible, perhaps before more sensitive items which are sign," Cunningham said. "There



Atlas scheme replaces unsuitable systems

by Robert Parry
A SYSTEM that works — that i the guarantee from Bolton-based Atlas Computer Consultants. It is offering clients a policy backed by Lloyd's underwriters which will ensure that a recommended system that does not come up to scratch will be replaced with a suitable alternative from a new supplier, at no extra cost to the client.

"We recommend a 'best supplier for a particular client, but things can go wrong," says Atlas managing director Maurice Hamlin. "This way the problem is left for the insurers to deal with"

The scheme has been running for about two months now, and has proved relatively successful in appealing to clients. Of the 12 that have been offered the guarantee scheme - which is not available retrospectively for systems already installed - nine have taken it up

The clients pay £2.25 per £1,000 antee on a system Atlas recom-

Big Brother moves into supermarkets

by Donald Kennett speaking at the conference on A NOVEL experiment in the US Cable Television and Retailing is using supermarket point-of-sale run by Retail Management De-equipment and one-way cable velopment Programme of equipment and one-way cable television to monitor how television advertising affects buying labits, a retail management conference heard last week.

Market researchers are able to and out which of 1,500 volunteers in aix cities are tuned to relevant channels when client companies have advertisements running. The information can be correlated with details of goods the volunteers buy at their local supermarkets.

information is collected from the supermarkets by bar-code readers at the check-out till which ar installed free by the market research company in return for the data collected. Volunteers are identified when they present their machine-readable identity cards to he cashler and they are motivated m do this by the inducement of a

monthly prize draw, The system was described by Grald Eskin, the founder and vice-president of Chicago-based market research company In-

telephone to the cable centre. formation Resources, who was Leader Comment - page 13.

Answering questions about the invasion of privacy this type of operation represented, Eskin said that far from resenting it vol-

unteers appeared to be pleased with the opportunity of showing

manufacturers what they thought of their products and the advertise

The equipment installed in vol-unteers' homes works on conven-

tional one-way tree-and-branch cable television networks of the

type currently installed in the UK. It can be individually addressed

and controlled from the cable

distribution centre so as to show a

test advertisement sent out on

'dummy" channel in place of the

to. And it can be instructed

collect data on which channels have been selected during the course of the day and send it by

Reshuffle at top of BM has brought its UK manufac-

clear together by creating a new to lob of manufacturing and development director. The lob has some to former development director john Fairclough, who has also moved from managing director of like United Kingdom Laboratoria, to chairman of the

tis to chairman of the research

Ranciough is a long-serving and doBall man. He loined the Hursley and Jack Hockley has moved from abouttory in Hampshire in 1958. Hursley to laboratory director and as such in 1970 he went to the responsibile for UK manufacturing at the long that the responsibility for design and manufacturing at the services director and as such in 1970 he went to the responsibile for UK manufacturing at the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in the services director and as such in 1970 he went to the responsibility for design in 1970 he went to the r



FAIRCLOUGH . . Long-serving

low him. Another long server, Jim Miller, who joined as a trainee in 1952, has moved from director of Nixon said: "John Fairclough's the Greenock factory in Scotland to manufacturing director, report ing to Fairclough. Alex Wilson assistant plant manager at Green as at Green to manufacturing director, report-ing to Fairclough. Alex Wilson, assistant plant manager at Green

May prought Representation : 18M

FACE TO FACE WITH SYSTEK

"The computer system that ended our four year search was supplied by SYSTEK"

is in Ely, Cambridgeshire is one of the equipment in the UK. It was only two yea ago that they installed an inhouse computer system, after four years on a bureau. As suppliers and servicers of agricultural machinery it seemed sensible to further update the areas of stock control, workshop invoicing and accounts which had proved to be time consuming and tedious. The computer that ended the search was supplied by SYSTEK.

nformation. Being in the agricultural

was because we'd falled to find a company that would write a programme to cater exclusively for our own in house

256 Kb memory Ywo 32-megabyte storage module drives. 5 visual display units. 300 lines per minute band printer. LAS4 consola

I'd say we've gained the full benefits of the custom: "5YSTEK designed a programme that was virtually tailor-made. They listened and

could identify the four seasons because naturally the demand for parts in different Gordon Bovis, General Manager, Parts "We've been very fortunate, I think, with

SYSTEK because I believe we're one of the very few companies that are actually satisfied with our computer operation," the Managing Director of Standen's Gervase Drake-Brockman commented, "The reason everything's gone so remarkably smoothly is because right from the beginning we were able to deal directly with the top men 5Y5TEK being a company that listens to

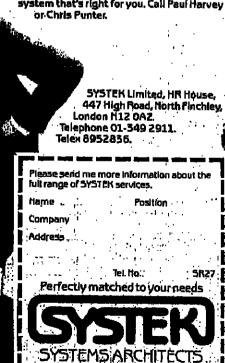
esponded so well that in the end we really felt we'd designed the system ourselves. Added to this the computer was installed



days." Gordon Boyis exp

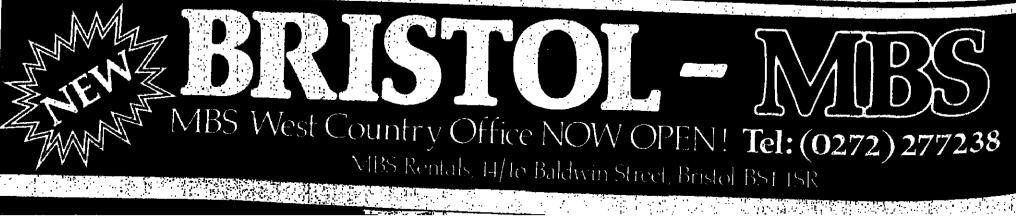
With overall sales up by 20% per annum I've found very fittle indeed to fault with SYSTEK," Gervase Drake-Brockman summed up. "The way they carried out the Job was absolutely first class. What more

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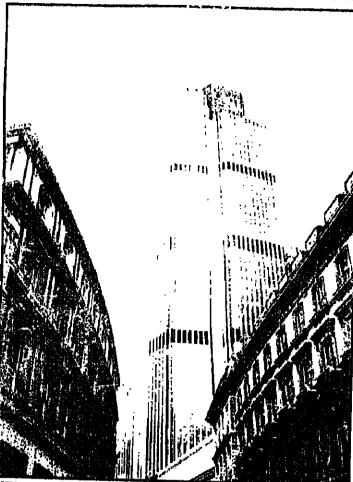


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from London Business School, as JORDAN . . . Team leader.



Small machines mean more space for people

by John Kavanagh INFORMATION technology is paving the way for companies to leave expensive city centres and giving staff more space to work in. These unheralded benefits of technological progress are high-lighted by a report from the Col-lege of Estate Management, which contradicts totecasts of falling de-

contradicts lorecasts of falling de-mand for office space.

"The impact of information technology is on office location, not size," said research fellow Graig Plumb, who prepared the report. "As equipment gets smal-ler and fewer people are employed companies are not necessarily cutting back on space but providing more space per person. This coincides with an increase in staff

"There is also a trend away from private office space to more conference space."

Plumb said information tech nology and communications were not the main factors to influence firms to move out of cities. "Information technology has enabled people to move back-room functions anywhere but things like rates and rents are the main influences," he said.

The report says it is no longer possible to predict long-term de mand for office space. "All that i certain is that change is inevite

Demand will not fall over the next five or 10 years, but the increase in demand will start to level off, says the report.

Ministry of Health's record of han-dicapped children risked damag-ing their prospects at school and

for employment. It was destroyed

Explaining the stand adopted by the Commission, its president, Senator Jacques Thyraud, said; "We are not seeking to block scientific work, but to respect the balance having the president of the balance having the president of the second delay."

balance between the sacred rights of the individual and the needs of medical research."

cases is not informed of the diag-nosis. This makes it difficult to ask him to agree for his case to be registered in a database."

Thyraud added: "One difficulty

Privacy law delays the fight against cancer

PROGRESS in the fight against cancer by Prench research teams is threatened with a serious setback by the application of the five-year-old law which safeguards citizens' rights against data processing misuse.

Doctors say their efforts to co-ordinate information about patients medical histories is being thwarted by both the Penal Code and the National Commission for information Technology and Civil

The medical profession claims that legislation designed to protect civic rights prevents the creation of a national database listing all cases of cancer in France.

This database is an essential tool

Article 388 of France's Penal Code which incorporates part of the Hippocratic Oath, provides for sanctions against doctors and members of the medical profession who disclose confidential information obtained from patients. for identifying phenomena which link sufferers according to age, place of residence, medical history and other characteristics. Without it progress in the battle against cancer cannot be made, according to French doctors.

to French doctors.

Minister of Health Jack Ralite says the problem is so drgent that The 1978 law on data privacy says that when details about a patient are incorporated in a data bate, only a doctor can have access. says the protein is so urgent that he is asking the country's top law reviewing body, the Council of State, to rule whether doctors would be breaking the law if they establish a ditabase register of can-

State, to rule whether doctors would be breaking the law if they establish a distabase register of can cer sufferers.

The Commission ruled that the tion Technology and Civil Liberties has already succeeded in getting one official medical database's properly because of the state of the records scrapped.

Professor. Robert Lamant of France's National Institute for Health and Medical Research, says: "We are up against a major problem. Dictors are wortled. They are unable to do their job properly because of the state of the law on data processing."

'IT is about money, not technical excellence'

passing bus network will be run-ning neck-and-neck in 1986 with 30% each of a \$390 million mar-"It's worth remembering that

30% each of a \$390 million market, according to networking company 3Com's international marketing manager David Coulson.

Speaking at a seminar on local area networking with the Unix operating system held by Keen Computers, Coulson said that Ethernet hald two years to establish itself while IBM developed its system.

"It's worth remembering that information technology is not about technology is not about making money."

Heard told delegates not to be mesmerised by the enormous amount of standards work that had gone into the communications layers of the International Standards Organisation's Open

works in general so far have been more talked about than actually used. Another speaker at the seminar, Dr Ken Heard of the Joint Network Team for UK university and research council systems, suggested that Xerox, slow," he said, "but standards are which developed Ethernet, in many ways misunderstood the Standards Organisation works to a standards making machinery.

gone into the communications layers of the International Standards Organisation's Open

Systems Interconnection model.

Although they were necessary,
they were insufficient without the data processing layers of the model distributed applications to share "Software implementation is

that semiconductor manufacturers were producing "soft-centred" networking chips, that could be configured to a variety of specifications. But this was bad news as well as good news, because al-though they would allow mistakes to be rectified, they would also

plementations Although it is a competitor to Keen's supplier Corvus, 3Com was invited to Keen's seminar because

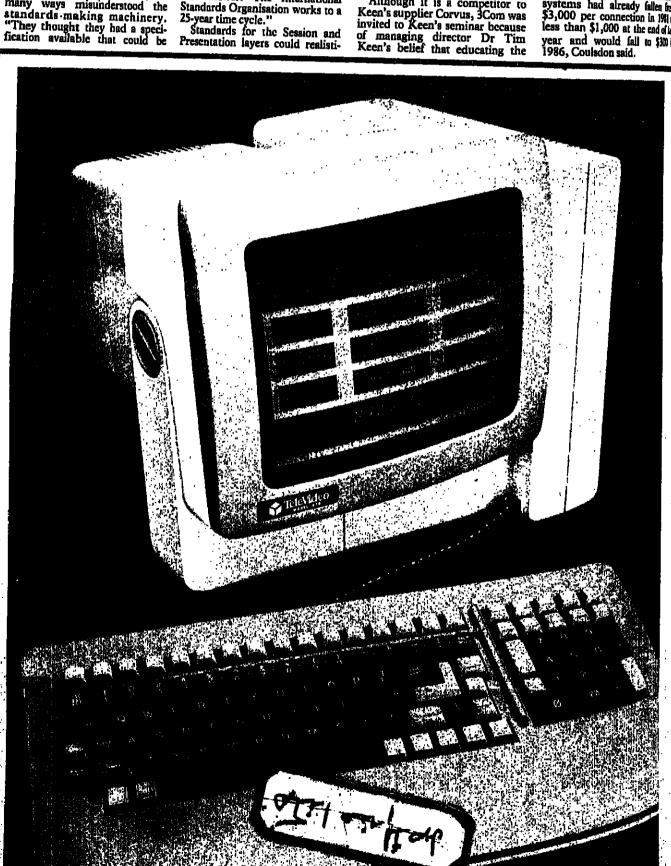
allow different incompatible im-

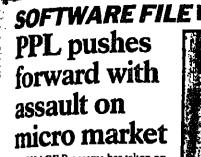
ystems, he said. It was interesting

million local area network met.
was dominated by non-Ethre
systems such as Corver: that standards were necessary for from different suppliers - or even Nestar's low-cost types sined in microcomputer users and t different systems from the same supplier. There was a danger that any small difference was enough to prevent compatibility between

PABXs. Ethernet's share work 3Com specialises in Educa-Having been set up in 1979 a. consultancy, it moved quickly to manufacturing, first sil-transceivers for interfacing im-nals and processors to the ob-itself, then with controller draboards to plug into the strate processors and finally with m working software to run in b processors, provided that they

Average prices for Ethers systems had already fallen for \$3,000 per connection in 1911 year and would fall to \$30 i 1986, Coulsdon said.





PACKAGE Programs has taken on board micro expert Vince Bennett from System 200 to back its assault on the bottom end of the market. He will be the company's key man in its adaptation of its range of business management programs

for small computers.

PPL believes the experience
Bennett gained at System 200—
and before that with Datasolve,
GSI and Univac— will strengthen
the team it has lined up to make the most of the burgeoning micro oftware field.

Managing director Roy Taylor says PPL is pushing ahead with investigations of the field, inde-pendent of the giant American corporation Software International for which PPL is an agent, although Software International is also moving in that direction. Most of PPL's micro range will

be developed in-house, according to Taylor. This marks a shift of emphasis for the firm, which has previously divided its efforts qually between development and



The new 970 from TeleVideo.

Nothing else looks like it.

Nothing else performs like it.

TAYLOR ... "We intend to spread ourselves."

But the first micro product likely to emerge is the interactive

financial planning system IFPS written by Execucom of Texas, which is working on a scaled-down system at present. 'The micro version should be

available for the IBM PC in the summer and will be almost identical to the mainframe one," said Taylor. "It can be used as a of a hardware network,"

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volatile function keys save time and energy.

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ful on the eyes, and its 132 column display

can format more information. All in highly

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problem with our unique vertical convec-

Like every feature of the new 970, the

screen at a touch, so you avoid neck-

people and their equipment working

exciting, new TeleVideo 970 to perform

better than any other terminal.

efficiently together.

house are expected to be on the market by the end of the year. Taylor is awaiting the report of Stewart O'Malley, who is on an inspection tour of the Gulf, Australasia, North America, Hongkong and Singapore.

Taylor confirmed: "We intend spread ourselves abroad with sales and support offices in various

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NCC Cobol tests may help exports

compilers along lines laid down by the US Federal Software Testing Centre. And there are plans to launch a similar scheme for For-

tran later in the year.

The service is being backed by the Department of Industry to the tune of £60,000 over its first two n April 1981 to consider information technology standards. Last week Junior Industry Minister John Butcher, welcoming the ini-tiative, said it was the first public service for testing software products to a recognised standard in

The work is to be done by the

of its operation. A new Ansi standard Cobol if approved in that time could open the floodgates to a "whole raft of new Cobols", according to the NCC's Tim

The US government has run Co-bol validations for a number of years, but recently has stopped sending representatives abroad to look into software matters. The UK Ministry of Defence has tested Coral products and there have been unofficial means of having programs investigated, but the NCC's is the first scheme to be negotiated with US authorities and to stand on a par with their own. The FSTC has also recently begun validating Fortrans.

German centres to carry on the same service during 1983, in

duced by the National Computing Centre carries the US government's stamp of approval and could help boost British software exports.

The NGC is to a state cleent of the flood gates t authors with recommendations for

The NCC project is being sup-ported by the government procurement body the Central Computer and Telecommuniadopt its checks for buying software when public sector users need them. Cobol suppliers to the public sector are to be asked whether their software is up to the

A SYSTEM for managing small hotels has been launched in the UK by Cara Consulting, a sub-sidiary of the nationalised Irish air-line Aer Lingus. Called "Rooms" the program was written by an in-dependent Dutch software house Datavision and is based on the

Philips P7000 micro.
Cara, which already markets the
Philips-based Datahost system
for larger hotels, thinks that Rooms will open up a new market among hotels of 100 to 300 rooms. The system is claimed to integrate word processing and electronic mail scilities. A typical system will cost £40,000 to £50,000. Bighteen UK

NCC mark. "Guinea pigs" for the scheme were compilers put forward by Systime and CTL which were is-

ready for DG

AVIL/4000, a successful mechan

cal engineering software package.

has been made available on Data

General's 32-bit minis. Anvil was

written by Pat Hanratty of Manu-

facturing and Consulting Services

(MCS) and is marketed in the UK by Impell. The CAD/CAM system has already been adopted in the US

by Westinghouse on its Data Gen-

trated by Impell for the first time in Britain at the CAD North exhi-

Professional WP

DEC's Professional micro now has

Ada for Concept

US MINI manufacturer Gould SEL has introduced Ada and Pas-cal compilers to run under its Unix

Operating system on the Concept 32 machines. Both Ada and Pascal

compilers generate machine code via the 'C' language compiler.

32-bit minis

It is hoped to open French and sued with certificates. The cost of screening is likely to be about £2,000. Impell Anvil

Rooms for small hotel managers

its first word processing system, according to Tom Barnard, managing director of Acc Microsystems. Acc has developed the Lex-11 system for the micro as well as for DEC's PDP-11 and on its own set of tools for the Pro-fessional, which includes a word processing system and will be anounced shortly. Barnard was the nventor of the National Computing Centre's award-winning File tab kunguage.

hotel managements are said to be now studying it, including Trust House Forte, which is a Datahost

Omicron order LONDON software house Omi-

first year. He has negotiated the UK rights, as well as world rights by agreement in principle with Datavision.

He has also signed up Dallas software house Cutler Williams to promote Datahost in North America. Its 30 North American users have been supported by Cutler Williams aince Philips decided to sell its interest in the American market to Cara last year. Londonbased Cara has been unable to find a US presence since then.

Cutler, a financial and commercial software house, will be selling Datahost under the Motorola label. Motorola makes the chips for Philips hardware and will maintain it in American hotels; Cutler will be supporting the software, while Cara researches chance ments.

vantage of many Cobol packages.

Software File is compiled by George Black

tion cooling tower. And because we wanted to extend the Poma House, 80 Guildford Road, West End, Woking, Surrey (GU24 9PW Tel: Chobhain (09806) 8484. Telex: 858822 TELVID.

Rodime first with 3½in Winchester

BRITISH disc maker Rodime has set the pace for the next generation of Winchesters. It has launched balf the height of a standard 514-inch drive. By overpackaging the going to be comparable with exist-Mbytes, based on the design of its for a half height 514-inch drive. current range of 51/1-inch units, and hopes to pull the rest of the Winchester building community Winchester building community along with the standards it lays down through its early announce-

31/2-inch Winchester," says Rolimensions standard, the disc one stone," he says. diameter standard and the innew generation of rotating disc

drives has been most noticeable

versities, backed by money from

oil giant BP, are setting out to steal a march on the Japanese. BP's Venture Research Unit has come

up with a £128,000 grant, spread over three years, that will allow researchers at the Universities of

Dundee and Edinburgh to work

towards cheap, fast reprogramma-

ble memory chips based on amor-

phous silicon, rather than crystal-

of present semiconductor devices.
"It's still very much a laboratory

project," says Peter Le Comber of Dundee's physics department,

Exactly the same is true of Saabs

And yet, in many fundamental respects, all Saalos are

tried to cut corners on his less expensive models wouldn't sur-

young executive and a Managing Director.

their lough, anti-corrosion treated bodywork,

ine silicon used for the vast bulk

a 3½-inch drive carrying five or 10 unit it can be fitted into the space

moving the half height 51/4-inch

'It soon sank in that if we were clever we could produce a sub 51/4dime's marketing director Mal- such that it could also be packaged colm Dudson, "and we believe it is as a half height 514-inch Winchesgoing to set all the standards - the ter - and so kill two birds with

The length of the drive was set terface standard - for a totally at the width of a normal 51/4-inch drive, allowing two units to be packed side-by-side in the space of a single half height 54-inch unit. Once these physical dimensions

with floopies, where there is a had been fixed, giving Rodime its multiplicity of manufacturers with best chance of filling the hole in front panels - the rest of the new The basic unit is the same width drive came naturally, adds White.

really know how it works, but it looks a good idea and a good de-

in amorphous silicon devices, par-

icularly in Japan, where they have

ducts through solar cells. Le Com-ber reckons there are 50 to 100 laboratories working there with

It is cheaper to process than crystalline silicon, and large area devices are feasible. The Scottish

workers have already taken out

patents on their memory circuit. They have found that solid state

There is a lot of research interest

BP £128,000 grant for research

going to be comparable with existing 51/4-inch drives, so the logical interface was the standard ST 506 interface," says White. "That removes one huge integration prob-lem at a stroke."

As for the disc diameter, this was a function of engineering design, and Rodime picked 96mm. with the same diameter central hole as present 514-inch media, manufacturers to gear up to produce the new disc platters. Conventional manganese zinc ferrite heads are used on either

oxide or thin-film media. The present Winchester market heavily weighted towards units up to 10Mbytes, and it looks as if things will stay this way for some time. By bringing down the size of the drives, with associated weight savings and a need for less hefty power supplies, Rodime hopes to open up the market for Winches-

random network rather than in the

ordered structure of crystalline si-licon - that can be switched be-

tween two stable resistance states

elements on to single

by an external voltage.



DUDSON . . . "It is the first and the definitive 31/2-inch Winchester."

But even sample drives will not

pricing, committing himself only to a "very competitive" price com-pared with equivalent capacity 514-inch units.

IN A move to strengthen purchas-ing power and streamline the business of selling microcomputers, three Sirius dealers have banded together as the nucleus of a new micro dealer franchise chain.

sell, before actually selling pulse. The switching area is a few nes or supporting custommicrons square or less, giving the

ciency and spread responsibility for everyday running of the busiallow for wear in the mechanic parts — and systems that but

this year. They will be much the same, focusing on general business applications rather than particular vertical markets for now. Initially he is looking for established Sirius

months, and Dudson is coy about

what you'd expect of Saabs, but their combination of performance will look better in the company car park.

ness," says Jenkins.

more consistent software, evaluated centrally for all dealer

passenger and/or load-carrying space.

or the excellent finance and leasing terms

Micro News is compiled by Robert Parry

Versatility is another slightly less well-known family feature

And all Saabs can be covered by the Saab Executive

All things being equal, you won't find a range of cars ha

For more details of the Saab range, the Executive Car Page

Car Plan* which, in the unlikely event of a breakdown, includes all

a Saab ever be off the road, you'll get help with car-hire costs to

find general acceptance. Applications envisaged for a device include machine that Dealers get together be able to adapt to changing of curnstances — like self-calibra

Micro Nationwide, as the new The switching is fast, and the devices look very non-volatile, says Cliff Jenkins who aims to cut down the time small dealers have to spend just running the business and looking for decent software to Le Comber. The change between the high resistance state is trig-gered by a 5V pulse, while the

ers.
"It will give us benefits of greater buying power. We will buy stuff centrally and so get better potential for cramming many

All Saabs can help your workforce keep their grip when Between the 99 GL at £5950 and the five-door Turbo at others are losing theirs, in rally after rally. Seabs have proved that, whether you choose three or five door hatchback models work. almost £12,000, there's as much difference as between a promising for road-holding in testing conditions, front-wheel drive is no less four door saloons you can be sure of an enormous amount of

And all Saabs put your drivers' safety first; they il go about

Perhaps these down to earth, practical virtues are simply

your business protected by a rigid steel passenger cage and

"EVERYONE IN THIS COMPANY IS EQUAL.

Perhaps it's to do with being Swedish: with driving conditions as arduous as any in the world, a car manufacturer who and a heavily padded knee-guard under the facia.

Perhaps it's to do with being Swedish: with driving conditions like a reinforced inner-ceiling rescue and recovery service, provided by the RAC. And should continue the facial rescue and recovery service, provided by the RAC. And should allow the facial rescue and recovery service, provided by the RAC. And should allow the facial rescue and recovery service, provided by the RAC. And should rescue and recovery service, provided by the RAC. And should rescue and recovery service, provided by the RAC. And should rescue and recovery service, provided by the RAC. And should rescue and recovery service, provided by the RAC. And should rescue and recovery service, provided by the RAC. And should rescue and recovery service and recovery service, provided by the RAC. And should rescue and recovery service and recovery service and recovery service and recovery service.

franchises, and better maintenance Jenkins hopes to spread the net to 20 to 25 dealers by the end of

applications.

The self-adjusting capable already possible, but only until using separate process

Seeq to put

EEPROM

on TI single

chip micro

SEEQ Technology's electric erasable programmable for technology has found a micro.

ments. Seed has signed up with to produce an EEPROM water

the TMS 7000 single-ci-

microcomputer, in which lok is Seeq's EHPROM will replace it standard ROM as program.

Seeq is calling the part the 70.

adaptive microcomputer, and at-functionally and electrically its changeable with the TMS 22

But by incorporating the Et PROM, the device has the the

to alter its own non-volut

through signals generated the chip, or can be reprograme remotely, down a telephone in TI will start building the II

PROM version of its eight

microcomputer next year, pa

instruments or machine took b

from remote reprogrammy

Point of sale terminals, par meters and household applica-

fit into this category.

Because the EEPROM more

tegrated on to a single chip, is device should come in at a par

that puts it in range of course

the Seeq part the respectability second source, needed if it

SHARES TABLE The shares table, which is specially compiled for Computer Weekly, shows uleted computer companies that reflect the state of the computer industry. to 700% profit

1	68.	London Stock Bitchange	Pe	000	• •		US Stock			4
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COMPANY NEWS

Ex-ICL man

bouncesback

AN ICL man who retired early to

AN ICL man who retried early to join an estate agency has come back into the computing business in style with an estate agency package. For Dereck Caston has sold the system to the UK arm of Canadian software financiers Sydnam Development Company. And

ney Development Company. And

the package has a potential market of around 20,000 users, with little

Caston is to head the marketing

of the package for Sydney, al-though he is not joining the com-

pany full-time.

Caston was at ICL for 27 years before joining a friend in the estate seasy business in Deal, Kenta. After six years he saw the potential for a sweet on microscomm.

for a system based on microcomputers, which were then starting to emerge. He developed a single-user system on a Tandy machine

but later settled on the Prince from

the UK manufacturer Digico.

"The Digico computer offers Winchester discs and growth from

single user systems to networks.

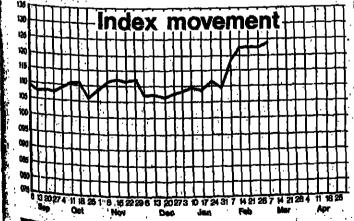
Six orders for the Digico version

with estate

package

by John Kavanagh

The table shows the closing prices in Landon on Priday and in America on Thursday. The Share lake it hand on the prices of the UK companies in the table. Highe and Lous have been adjusted



Caston and customer . . . 19,999 to go.

'AT&T set for

THE US communications giant American Telephone and Telegraph (AT&T) is moving firmly towards being a total systems supplier and could get into against the communications com-

So said US research firm Yankee Group last week as AT&T an-nounced plans to raise \$1,000 million in a new share issue. The move follows a similar \$1,000 million stock issue in December. AT&T spokesman said last week which took the company's 1982 that the company was aiming at money-raising activities to \$4,800 the end of this year.

A titanic battle between IBM and AT&T has been expected since the US government dropped its anti-trust, or monoply lawsuit pany last year. This cleared the way for AT&T to move into the data processing field. The settlement also involved AT&T divesting itself of its 22 local telephone companies. That had to happen by the end of February 1983, but an AT&T spokesman said last week

director at Yankee Group, said AT&T was clearly moving from a services company to a "true inte-grated systems vendor". As well as telephone equipment and services companies. That had to happen by terminals and workstations,

He added: "AT&T will definitely move into minicomputers in won't be through a takeover of a big company, as that probably wouldn't be allowed under anti trust rules. It will probably go with

Case to boost sales by mail order

ranging from modems to the Grap-

evine local area network, printers

business with its communications products in a bid to boost sales and ease the problem of specialist staff shortages. The UK communications equipment manufacturer expects the move to encourage its users to do their own installation

20-22 April 1983

The London Tara Hotel

and terminal tables, was sent to 50,000 users and prospective customers last week. The catalogue includes advice on choosing the right plugs and cables to connect the equipment.
"There is pressure on prices

throughout the communications sector because of increasing com-

director Peter Burton. "As a resul same time there is an acute shortage of engineers and technical sales staff, white the equipment is now very user friendly and the users are getting more experienced

at installing it.
"We hope this move will increase our sales more quickly."

Growth slips up by 1500%

ROWTH at US microcompute manufacturer Convergent Techno-logies has dropped right off: it was a mere 700% last year, In 1981 the company grew by 1,200%. But if any die-hard pessimists were gloomy at such a drop, the profit

Revenues were \$96.46 million in 1982 — and the company ended the year strongly, notching upuales of over \$42 million in the fourth quarter. Profit was \$11.9 million, compared with \$777,000 in 1981, when the company was

In profits too, the year ended on high note, for the fourth quarter igure was just under \$5 million. Convergent Technologies

numbers some big names among its customers, including Burroughs, NCR and Computer Technology in the UK.

In France the company's 16-bit machines have been transferred from Thomson-CSP to the main

computer manufacturer, Cil Honeywell-Bull, which has signed a two-year contract on the proa two-year contract on the products totalling over \$20 inillion.

"We only talk to big companies because we do not have the resources to support small systems houses," said Martin Lipman, sales manager at the recently opened UK aubsidiary. The company has 700 staff, including four in the UK, It is planning further subsidiaries across Europe.

Convergent Technologies has appointed Robert Towbin, a senior partner at merchant banker L. F. Rothschild, Towbin, to its board. L F Rothschild was a member of a consortium which put \$8.3 million into the firm in 1981.

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BUT SOME ARE MORE EQUAL THAN OTHERS.

To your company, that means all Saabs are built to keep and economy may well surprise you. To take just one example,

their residual value: the British climate holds no terrors at all for the GLi, second only to the 122 mph Turbo in performance,

tare as follows: Simulated Linban Cycle - 219 mog (12.9 L/100 km), constant 56 mph - 38,8 mpg (7.3 L/100 km), constant 75 mph

Where to go for the best 'perks'

by John Riley
COMPUTER staff working in finreport published last week. ance companies get the best perks, and those working in the public **PUZZLER**

PP-P-P-P-P-P THIS little project in network analysis involves linking A to A, B to B, C to C, D to D, and E to E, using five separate lines drawn along the grid and through the circles. These lines, however, must not intersect. Solution: page 53.

7

tions receive better life assurance cover, more assisted mortgages, and more non-contributory pension schemes than their counterparts in other professions.

That is the result of a survey of

491 computer installations em-ploying 29,302 staff across industry, covering computer manufacturers, bureaux, software houses, financial institutions, retail and wholesale distribution, the public sector, engineering and manufac-turing, and the financial institu-

The public sector, comprising local and national government and nationalised industries, fared consistently poorly for fringe benefits, although the sample, comprising 21 installations representing 1873 DP staff, was low.

All the banks and building so-

report published last week.

Professional DP staff at all levels in banking, insurance, building societies, and other financial institutually no mortgage assistance.

Financial institutions offer the best life assurance cover, averaging three to four times the annual salary. This compares favourably with the average of two to three

An average of about 60% of staff in each sector get free or assisted membership of a private health scheme. Pinancial institutions do better, and the public sector fares

While 98% of all the installa tions offered sponsored pension schemes, a high proportion of the financial institutions offered noncontributory pension schemes, while the most expensive schemes were in the public sector.

*Survey of Computer Staff Fringe Bene-fits. January 1983. Computer Economics, 51 Portland Roads, Kingston-on-Thames. 250.

Realistic images for the pilot

IT is clearly desirable that trainee drawback was the poor quality of

Simulators are also cheaper they can be hired for less than a quarter the cost of an aircraft, and in recent years have advanced quickly to become almost like the

Progress in computers, hydrostatic motion and integration of aircraft data have led to the improvement. But until recently the

airline pilots make their mistakes in a flight simulator rather than the cockpit window. Only nighttime images, much easier to produce, were possible.

But now daylight images can be produced, imitating the runways, control towers and hangars, as well as the passage of the ground dur-ing mid-flight. But the visual systems are expensive, accounting for over £1 million of the £6 million cost of a commercial

Sussex University is trying no make the visual system change. With the help of a Ministry of help of the control of the contro fence grant, a team led by Drie Woolons is developing one by would sell for about £300,000. The team is also aiming to make the simulated images more realistly adding textural information to m

a better impression of disturce. Woolons says Sussex Univer aims to cut the price of the visal system by use of special process designed in its laboratories.



Shedding light on computer speeds

BINSTEIN taught that the speed of light in a vacuum can never be exceeded. He has yet to be proved wrong, so it must make sense to use light to carry information.

Already optical fibres are beginning to replace cables, so why not have an optical computer based on light which could link directly to the optic fibres? Such a possibility lurks well behind the financial holize at 1800 km at 1800 km. rizon of 1990, but a big first step has been taken at Heriot Watt University in Edinburgh with the construction of optical equivalents to some electrical logic elements.

A team there led by Professor

Desmond Smith has produced what is called a transphaser, which is the optical equivalent of the transistor. Most of the digital switches in present-day computers are based on transistors. are based on transistors.

Digital switches rely on the logical AND and OR, which combine

cai AND and OR, which combine logical variables to produce one new variable. Logical variables can hold only two values — on or off.

The logical variable produced by AND is on if all the variables being combined are on, otherwise it is off. The variable produced by OR is on if any one or more of the

or is off. The variable produced by OR is on if any one or more of the variables being combined are on.

Transistors can be used to produce an AND by being linked so that a large output of current is only produced if all the inputs are large. In other words the large current is equivalent to the logical Workplace is compiled by Philip Hunter.

An OR is therefore produced by arranging transistors so that a less output current is produced who

any one of the inputs is large.

The optical transphaser produces the same effect as the transphase of the control of the cont sistor by exploiting materials (like glass, transmit some of the light that falls on it, but band, we refract strong light at a different angle from weak light.

Another property of light has to be utilised: Interference, Light can be considered to be a wave, Polihas its waves aligned in one diner-sion. When two beams of polared light meet, they interfere, and it the troughs of the waves of one beam coincide with the peaks of another, they annihilate and other or interfere destructively.

another, they annihilate the other, or interfere destructed. The opposite, constructive in terference, happens when the troughs and peaks coincide.

The Heriot-made transplant has two parallel plates of industruction antimonide (the gallium arsende of optical circuits). This is chosen because strong light is bent differently from weak light.

Two beams of laser light at forcessed on the plates, one committed.

cussed on the plates, one constant and the other varying in intending the intensity of a varying beant, it is possible move from destructive intensity interference. ence to constructive interference

MCS' micro offshoot

sent turnover is £4 million.

Haworth sees the new company

at a time when several large manu

facturing suppliers are launching

counts. He was formerly a system

support sales of micro mainfram software. He was previously with Babcock Power, where he was res-

nications and product evhuation.

MANAGEMENT Control responsibility for MCS group a counts.

MCS was founded 12 years ago Systems (MCS) has launched a new company to market a range of personal microcomputers. Called to develop specialist software packages for DEC hardware. Pre-Mancos Computer Services, the company is based at MCS' Manchester headquarters and will be run by MCS founders Dr Harold as a "logical extension to busing Levy and Dr Eric Haworth.

LEVY and HAWORTH . . . Launching into micros.

PEOPLE

Company secretary is Lynda Atherton, who has been company accountant at MCS for the past three years. She will continue her microcomputer products." Mancountant at MCS for the past vely," adding to the parent company's staff of 70. Company secretary is Lynda

Inmac has expanded its mar- Paul Coombe has joined Com king division with three new ap- art as senior sales executive, res ponsible for major government ac oined the company as marketing styles manager with responsibil-ity for the design and production of the Inmac catalogues. He was previously in a similar post at the Readicut Wool company. Mike Philip has worked for Inmac in the ■ Simon Clayton-Jones (below) has joined Encotel Systems to firm's sales operation for two years and has been promoted to product manager. Peter Hill has been named UK sales manager. He was formerly a sales manager at Moore

Peter Boundy has been appoint to European marketing support socialist at Masstor International. fle was previously a senior systems engineer for IBM UK, serving the banking industry.

John Bryan has joined Gould Instruments as commercial pro-duct manager. He was formerly an applications engineer with the measurement systems group of Hewlett-Packard.

Exxon Office Systems has samed Alan Scutt marketing manager, City of London. He has been with the company for two years, oning as a sales representative and going on to become major account sales manager.

DIARY

MARCH 14

Kilostream by the Post Office. IDPM Norfolk branch, Castle Hotel, Castle Meadow, Norwich. 7.30,

Porms design – an exposition on form design by an expert.

DPM Scottish branch. Names to Rona Gorham, tel: (0334) 55068.

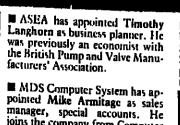
Games – th chance to

Opportunities for disabled people in computing. IDPM North-west branch. The Manches-ter Club, 50 Spring Gardens, off King Street, Manchester. 6.30. Visit to Longfield School Com-

puter lab. Numbers limited, contact IDPM secretary to book a place. IDPM Kent branch. Secretary Rod Mercer, Lamex Commer-cial computing, Apex House, Lon-don Road, Northfleet, Kent.

Games - theory and practice. A chance to understand the some hands on experience. Pollowed by AGM, IDPM Essex brench. County Hotel, Rainsford Road, Chelmsford. 8.00.

The fifth generation language? BCS Dundee branch. Dundee College of Technology. 7.15.

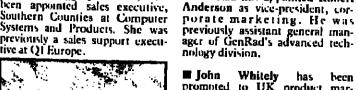


manager, special accounts. He joins the company from Computer Automation, where he was a sales

Counting House Computer Systems has announced two new appointments in its marketing organisation. Paul Reach, who joined Counting House six months ago as a sales executive, has been appointed CAD/CAM analyst.

Dave O'Hara, previously Northern sales executive at MDSI (UK), has joined the company as sales and marketing executive.

Marie Diggory (below) has ■ GenRad has appointed Robert been appointed sales executive, Southern Counties at Computer Systems and Products. She was previously a sales support execu-



■ John Whitely has been promoted to UK product marketing manager for the Newbury Data range of VDUs, protocol converters and ULA workstations. He was formerly technical support

Jim Beveridge has taken over as manager at Motorola's microprocessor marketing section. He was formerly the company's special functions manager, Europe Rob Baxter has joined Motorola Semiconductors after six years at Texas Instruments where he was in product marketing.

joined Computervision UK as financial and administration manager. She was formerly European financial controller at the European sales division of Zilog.

Robert Trick has been appointed marketing manager for Ampex products in Europe, Africa and the Middle East. He was formerly with the company's memory products divisions in the US.

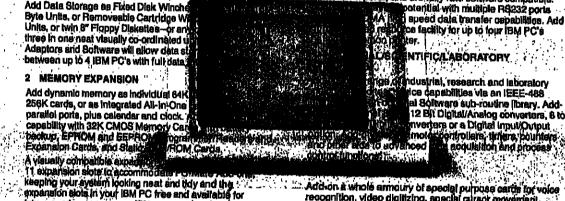
 To meet increasing demand for its automatic inspection products, Peerless Control Systems of Milton Keynes has appointed three senior staff members. Philip O'Toole has been appointed general manager He was formerly with Scanray and BIX. Ian Randall joins the company as operations manager, and Nigel Hicks joins the team of pro-

ADD-ONS, ADD-INS **AD INFÍNITUM**

possible applications and depth to its capabilities. You can choose from over 60 PC-Mate Add-ons -all fully compatible with your IBM PC. You can improve your standard facilities, or add new specialised functions. You can share data storage and output resources between several PC's, or eliminate the need to purchase new PC's for more occasional and less demanding requirements. Tecmar Add-one are already proven in thousands of applications world wide, and are now available

in this country from Comart-Tecmar's Sole UK Distributor,

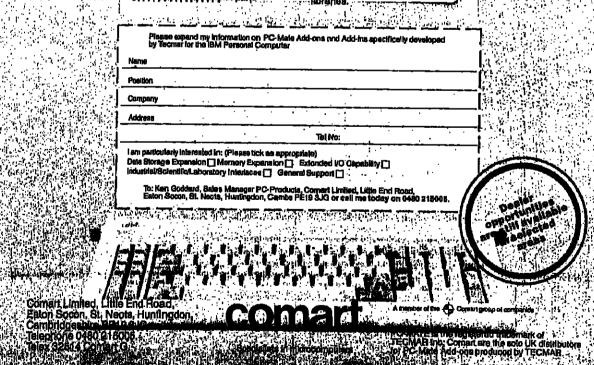
Just look at the possibilities for expansions and enhancement their send for further information, or talk to your local PC-Mate dealer. The possibilities are infinite.



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'Manchester is the place to be to stay ahead of the field'

expanding computer companies in the South-east and the Thames Valley, there is one thriving enterprise which has been in Manchester for 12 years and intends to stay

It is Northern Software Consultants (NSC), set up by Howard Sherrington on a mere £10,000 share capital and a £20,000 loan.

"Hosykns got half a million from the NRDC, but then they were in London," remarked Sherrington tersely. "There were a lot of British

companies trying to set themselves up in packages just then but most of them fell by the wayside for lack of expertise. Only Hoskyns and ourselves survived. He began as chief accountant for

Reader's Digest in Canada when they were putting in their first computer, an IRM 1410. "It was a big monster, 40K

memory, enormous He set up its control system for

handling two million subscriptions, labelling and billing. When he decided to come back to this country in 1965 he became Austin Reed's computer consul-

"I knew what I wanted out of a computer by then. I had realised that systems ought to be designed for accountants, not for pro-

He had to choose their machine. It was to be the first ICL 1901 in

An Austin Reed director who was a partner in Kidson's accountancy firm invited him to join Kidson's. But that appointment was short-lived and Sherrington went off to become a founder of the successful bureau Datasolve.

'I was there three years and in that time I learnt that a package must be just that. People were calling things 'packages' but they al-ways needed adapting. I could see that this wouldn't do.

Datasolve was taken over by Rothschilds, later by BOC and then by Thorn-EMI. But meanwhile Sherrington had gone on to establish NSC

He put it in Manchester because that was where he lived and where David Marsden, the technical



SHERRINGTON . . . "It's an advantage being based in Manchester"

director who came with him from Datasolve, lived.
"On reflection I don't know how we did it. The first three years

were tough ones." The company took off with contracts from the Post Office's national data processing service and the National Westminster Bank subsidiary Centrefile. Later they added the ITT data proces-

sing service, which was taken over by Control Data. "They were ordering from us a type of product which didn't then exist, but which we had just promised we could deliver. It was lucky they believed us."

Two developments in the early

Many firms, realising this meant a software revolution, opted for the package solution as a way out of escalating maintenance problems. NSC moved into bigger offices -

the team of five had tripled.

By 1978 the batch era was nearly over and NSC started putting 'front-ends" on its packages to make them workable interactively.

"It didn't take long for us to see that this wasn't going to be enough either. So we set about rewriting the whole lot to make them genuinely real time. Berger Paints was already looking ahead to this in 1980 and trying to find someone who was working in that direction. We were the only ones who were. We're always five years ahead of

He plans to retire when they have pushed turnover up from its present £2 million to £15 million "that'll be in 1987. No, say

But the head office will still be

"We need an office in London and one in New York, which we shall get. But it's an advantage be-ing based in Manchester. We recruit only graduates and many of them from Manchester University and we can give them interesting research work, so they stay with us maybe eight or nine years. That's how we've been able to build up to 45 of us."
So Manchester, heart of the first

industrial revolution, is managing to find a part in the second as well.

AT last those awful jokes about Jewish kamikaze pilots crashing their planes in their brothers

Lebanon to replace the houses flat-tened by Israeli bombs and rockets

this bait, remember

PLATFORM

David Fairbairn is director of the National Computing Centre

If we take

who's holding the rod

AFTER the flurry of activity which the Japanese fifth generation papers stimulated, there has been a long silence.

The Alvey Report proposing a British response has for the time being disappeared from view. Not surprisingly many wonder whether the threat from the East may after all be just a paper tiger and sur-mise that British computing can resume its accustomed path with no great fear of being mauled.

There are, however two respects in which we should take the fifth generation issue seriously and accept that things may never be quite the same again.

The Japanese document is certainly not what it purports to be. If it truly defined their deep laid plans for achieving computing supremacy, it is unlikely that it would have been published at all, and inconceivable that it would have been published in English. The most sensible interpretation is to see it as a "conditioning" docu-

On the one hand it sets out to condition the current keepers of the parts of the new technology which the Japanese most need to put their riches, if not in the public omain, at least in some easily

accessible place.
On the other, it seeks to condition the marketplace to be re-ceptive, or even demanding, of the kind of computing which the Japa-nese see themselves as best able to offer in the future.

we are making a passable job of swallowing the bait together with most of the tackle all the way back to the fishing reel itself. It may be right to do so, but we should remember whose hands are holding the rod. The Japanese are a very serious people, and never have they been more serious about anything than their belief that information technology may yield what the co-prosperity sphere

Guidance on the path we should

Computers can be funny sometimes

And my Tel-Aviv correspondent informs me of the latest joke doing

Computer salesman: "And this is our latest 32 bit micro, but to

As you can see, the computer industry is not fabled for its jokes.

There are, of course, noticeable

the BTG, and IBM operating systems — but on the whole, humour maintains a pretty low

the rounds out there:

pursue is not to be found in the fine words about man-machine in terfaces, VLSI and software age neering, important though the may be. There is an issue of different complexion in the multiple references to the masses. multiple references to the manage ment of knowledge and the cullenge to the conventional Vol Neumann principles which the emphasis on knowledge representations

This is an issue we should the extremely seriously, not as a pancea but with the appreciation the we are seeing the emergence of complementary style and tal nique of computing that has the potential of matching and may be even overtaking the familiar test niques of conventional DP.

To find out how useful and six nificant it may be we should be waste too much time contemple ing the leaves in our teacups, b instead put the techniques into r tive use in solving some of the straightforward but unexciting lems that confront us. will, I suggest, find that rule beed programming has some immediate benefits to offer.

A lugh priority must be given to handling complex databases, pur-cularly where we are trying to me with the unstructured text which constitutes 70% of business is formation. Rule based progress ming offers a way of handling sud information particularly whe used with specialised data had ing sub-systems of which the ICL CAFS is an outstanding example.

It is a short step from this to the use of rule based systems to provide for decision support. On the ultimate use of

knowledge based systems it is sa-sible to reserve judgment. What we urgently need is experience in their use. If the response to Also expected this month enables the to happen it will be an important step forward.

As living proof of this, kt # regale you, gentle reader, with what purports to be the first link

computer joke. Paddy: "Ah hello dere Michael,

and how would the new compact

project be going then?"
Michael: "Well, bejasts, I'a
having a bit of the old trouble with

the change of architecture."
Paddy: "And what might that

Michael: "Well I can't really go

to 10bit. I can't get my thumbs

Please, please, can't someone

out there send me a funny compt

then Michael?"

ter joke?

Quadrant House, The Quadrant, Sutton, Surrey SM2 5AS Thursday, March 10, 1983

Big Brother arrives on time

AS 1984 approaches, a growing number of schemes are being announced which will allow our homes to be invaded by electronic devices under the control of third parties.

In this country, we have been told of various means to read electricity meters remotely and to reduce peak loads on the electricity supplies by switching off water heaters in

But this is pretty tame stuff compared with developments in cable television accessories in the US.

The Chicago-based company Information Resources has been installing addressable devices that enable it to change advertisements that are seen in selected homes. The devices also log to the nearest five seconds the times that the televisions they are attached to are switched on and off and which channel they are tuned to (see page 5).

Further, the information gathered about which advertisements reach which homes can be correlated with the purchases the occupants make in the local supermarket.

So far only a small number of people are involved and their participation is voluntary - induced by the chance of a prize. But more widespread implementation and more compelling involvement could give the system a more sinster complexion.

The operation of such systems without the knowledge of the objects of their attention would be particularly easy to implement in a switched star cable television network - the type being advocated strongly by the government and British Telecom.

But it would be possible to do it with any kind of distribu-tion system including off-air broadcasting, given the appropriate adapter at the receiver or the appropriate circuitry built into it. Information could be collected over the telephone network, as it is in the US case, or over the power lines along with the meter readings.

More complete and accurate market research can benefit the consumer community by bringing it better designed and more efficiently delivered goods, and services, but privacy and data protection legislation must be made to provide all the necessary safeguards against manipulation.

Falling into place?

IT is all falling into place. The government is to respond soon to the Alvey Committee proposals on future UK information technology research. Meanwhile a report on the future of the British Technology Group has been delayed or at least a month.

The British Technology Group's emphasis is shifting to chnology transfer, the exploitation of research in the commercial market. The Alvey Committee also emphasised the need for technology transfer.

These parallel developments suggest that the British echnology Group is being groomed to take a leading role in implementing the Aivey proposals. If this is so, the £10 million investment limit put on the

British Technology Group this year is not the gloomy news it seems. For instead of heralding a rundown of the organisation it would represent a shift of emphasis from equity aying to funding research and bringing it to market. So it is all falling into place. But if the Alvey proposals do

not get through Margaret Thatcher's scrutiny and the British Technology Group is merely being run down, the UK information technology industry could fall apart.

1984 and all that . . . !

THIS week's example of the strange things people say about computers was sent in by Gillian Morris of Lelcester, who wins £5. Complex computers also talk to you, "Good morning," they'll say in their bright metallic voices. "Don't forget it's your mother's birthday today."

Leicester Marcury

Leicester Mercury

Opportunities Increasing chances in Scotland of dubious software I AM disturbed by the inflamma-

hensible garbage was produced then the inference was that the

There are several reasons why

treated. What is done about the

29th February in such cases? Is the operator continually beset with a check message on whether it is a

leap year every time the date is

All this would not only take up

memory which could be more use-

fully employed, but would prob-

independent evaluation of the Scottish Microelectronics Development Programme, SMDP (CW, February 17). WHILE watching a recent BBC computer programme, relating to business, I was astonished when a consultant, after commenting that there was much dubious software about, suggested that the criterion for assessing the worth of a program was to enter 31st February. If the computer accepted My first concern is that the author, Jennifer Boswell, refers to events not described in the report and uses her view of these events to re-interpret and misrepresent our findings. Furthermore she places too much emphasis on the questionnaire findings which show teachers to have been dissatisfied that, then it was likely there would further trouble down the line. Alternatively, if on inserting a discinto the drive, some incompre-

with the service they obtained from SMDP. program was not very user The programme staff were involved in many other activities. By ignoring our comments on other activities, she is then able to the first criterion is bad; not the least of which is that internal dismiss as a "non-sequitur" our conclusion that SMDP had made memory is a precious commodity and should be used sparingly. If for example, the 31st February is questioned, presumably various other month end dates would be so "substantial progress" towards its

One crucial issue we pointed out in our report was the problem of creating opportunities within the schools for teachers to be given time to develop ways of using microcomputers effectively across the curriculum. We asked for more opportunities in Scotland for in-service training and the full backing of education authorities in providing release to an appropriate providing release to an appropriate range of courses. Neither this is-sue, nor any of our other main recommendations, was so much as mentioned in the review.

The failure to discuss anything except direct or implicit criticisms of SMDP creates entirely the wrong impression. The tone of the article is so far removed from a dispassionate review of our report that I am left wondering who Jen-nifer Boswell is, and what SMDP and the Scottish Education Department can have done to offend

Professor N. J. ENTWISTLE Head of Education Dept University of Edinburgh.

Good reason for gloom

YOU quote the gloomy responses to the Scottish Microelectronics Development Programme questionnaire. I am not surprised and doubt whether the English MEP has done any better. There is a very good reason for this which the government has consistently

You don't give the English mas-ter a teach-yourself chemistry set, and launch him into the classroom. Yet local authorities up and down the country are giving teachers computer equipment and hoping they will teach computing.

We run a one-year full-time Diploma in Computer Education for classes of 20+ teachers. They are hard pressed to reach the re-quired standards. What hope is there for the

rtment of Mathematical Sciences and Computing Polytechnic of the South Bank,

mistakes of a more serious nature to be made. Regarding the other comment, if a disc is inserted and garbage results, surely the operator should be intelligent enough to check what has just been done. In any case, is this not a job for the system rather than the program? To put this sort of comment out

on a programme which is regarded by many as having some credibility, must surely increase the chance of the buyer ending up with dubious and unsuitable software. Certainly, there are other, more useful tests to show the worth of a computer program. While those mentioned are apparently adequate for BBC stan-dards, they would certainly not measure up to mine. K. KNIGHT

Godalming

The Editor welcomes letters com-menting on subjects published in Computer Weekly, or on original top-ics. All letters must be accompanied by the writer's name and address, not necessarily for publication. Letters

school-leaver

Advice to

YOUR sixth-form correspondent D. A. Leather (CW, February 24) and others like him should certainly consider taking a degree. If they can obtain 'B' grades at Alevel they could take our Physics with Microcomputing Degree which combines a basic training ir physics with the application of microprocessors to the processing of information and to control.

A particular feature of this four year course is that the whole of the third year is spent in industry acquiring practical experience. This industrial training year not only equips students to make rapid progress in their final year, but also makes them very attractive to

prospective employers. Industrial scholarships, awarded competitively, are available to students on this course.

In the rapidly expanding in-formation technology field there is a severe shortage of adequately trained graduates. Our degree ideally qualifies those thinking of entering this exciting area. Anyone nterested can obtain further details on request. Dr J. R. RIDER

University of Surrey

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EPSON ... New Stocks... New Prices...

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DOWNTIME I The power of prayer

THE following story is reported just as it happened, without any quips from yours truly. (Well less than usual, anyway).

The scene is America (where else)

else?), and a group of high-powered executives has found a new way to get ahead — the power of prayer. For these businesspersons are members of the congrega-tion of St Paul's Episcopal Church,

Stephanie Cimaglia, an IBM marketing person, stood before the altar and the packed house of whizz-kids and spoke of her prob-

10 YEARS AGO FROM COMPUTER WEEKLY OF MARCH 8, 1973: Burroughs introduced the disc-oriented B700 system with a price range from £9,000 to £40,000 . . . Data General opened an applications engineering centre in Manchester

. . . Memorex suffered a boardroom shake up with vice-president James Guzy leaving the company . . NCR UK reported nanual profit down from £8.2 mil-lion to £3.7 million,

raged? Of course not. She stuck with it and was rewarded. Her productivity increased, although she doesn't say whether her boss has now stopped hating her or has left IBM in desperation.

Worse still, a syndicated jour-

Liveware

nalist was quoted as saying: "Jesus' parables were always about people working, fishermen, sowers of seeds. Today we didn't hear from fishermen, we heard from the Xerox workers." The 150 executives had gathered

at St Paul's to hear a day-long session titled "Is Christ Chairman of Your Board?" One ex-president of a textiles company was heard to watching breakfast TVs in the car on the way to work, and at home before going to bed, her productivity went down.

But was our Stephanie discounties to the state of the state of the state of the would rather be out ski-ing, but most of us are aware that there is something lacking in industry."

Sanity perhaps?

WE NEED AN EXPERT SYSTEM FOR GETTING GOVERNMENT.

FOR THAT LITTLE

EXTRA...

scrapyards have been given cre-dence. It seems that a group of Israell builders have got together to build an estate of prefabs for sale to homeless Palestinians in the Lebanon to replace the houses flor

knowledge. But Computer Weekly can at last claim to have educated

at least one reader, who commutes

The contractors were unable to

... IN THE WAY OF TROUBLE MOOTING.

resist the temptation to advertise the dwellings as bullet-proof. How CW puts its readers in the picture NOT often is it our lot to push forward the frontiers of

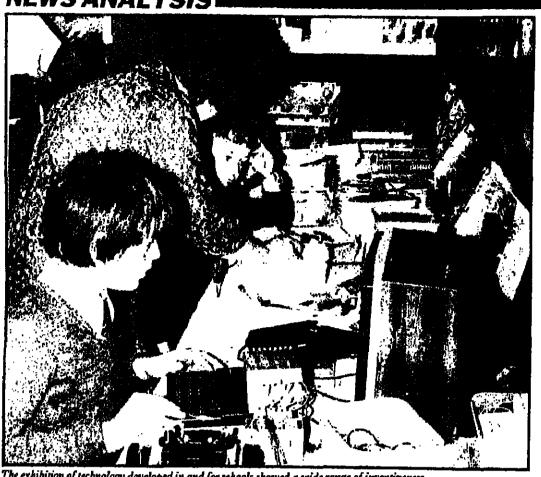
to work and each day passes Sto-rage Techology's glamorous new offices in Esher. I chanced to fall into conversa-

slip the awful admission that for months, before reading an article on Storage Tech in this journal, he thought the company was involved in making kitchen units.

Fractured WE have suffered bravely such American abominations as oncoas scenario situations, ballparks, gui MODESTY eels, hypes, rip-offs et al, PASCAL! things have come to a pretty per when we are expected to take its latest act of butchery lying down!

In the Press handout concerning an upcoming exposition situation, the presentations in the accompanying conference are not billed a talks, speeches, or even oralizations of the presentations of the presentations of the presentations. tercourse situations.
Would you believe "Group lev





There are two sides to any

In this case, the front of the

coin is about exploiting the new

Data terminals communica-

data bases provide a better basis

for decision making, rapidly and

Word processing saves time

Personal computers make it

possible to perform important

computations, calculations and

Solving such major applica-

tions part by part, you may end up with incompatibility. With a

range of suppliers and of ser-

vicing agreements. Operator

desks with two, perhaps three

That's the other side of the

coin. Expensive and ineffective.

is a need for a second thought

Today, more than ever, there

simulations locally.

to numerous members of staff.

ting with host computers and

efficiency and cut costs.

and labour.

technology to achieve maximum

Software is vital East-West for schools plan

John Riley assesses the "micros in schools" programme

THE announcement last week that at the next stage through lack of the government is pumping a funds.

drummed up by Fothergill from industry, including IBM, BP and in the government is pumping a funds.

further £9 million into its Micro
The first stage was the subsielectronics Programme for Schools (MBP) to extend it until 1986 was widely welcomed by cash-starved

The Junior Education Minister, William Shelton, delivered the news to a packed audience at a agham exhibition of the MEP's nationwide activities. Among the invited visitors were teachers, academics, local government of £14 million.

The MEP, funded by the Department of Education is the partment of Educatio

However, in the wave of euphoria and relief accompanying the announcement, it is important to put the MEP into perspective. Although significant, the MEP is second of three stages with the overall objective to get all schools routinely teaching the principles of

One thing is perfectly clear.

There won't be room for more

than one terminal at the operator

desk of the future. One terminal,

with numerous functions. And

ergonomically designed! Alfaskop is basically a data ter-

minal for communication with

another program it becomes a

local work station. For example

a word processor or a personal

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computer.

functions.

terminal.

I'm interested

Company.

host computers. But loaded with

computing.

The objective may still founder

dised provision, on a pound for pound basis, of hardware by the Department of Industry. The programme is now well underway effective packages. These are four national MEP centres for software development which aim to produce cheap by the control of the provision of the provisio gramme is now well underway with an estimated 98% of secondary schools and 30% of primary schools already possessing School, Cambridge; and King Elements of the secondary schools already possessing School, Cambridge; and King Elements School School, Cambridge; and King Elements School Sch micros (but not peripherals) at an ward's Five Ways School, & estimated total cost to central gov-

second, complementary stage, set up to develop educational software and aids, to provide in-service training for teachers, and to co-ordinate and publicise these activi-

The programme had a bumpy start. Originally intended to be a £12 million four-year programme, it was caught up in the 1979 General Election, was delayed a year and ended up with £9 million to be augmented to cover inflation. The spending has been: 1980/1 - £1 n; 1981/2 - £2.8 million; 1982/3 — £3.6 million; 1983/4 — £4.3 million. The additional £9 nillion for two more years marks a

FOTHERGILL . . . Buying is left

However, the third stage, get-ting the software and aids into the schools, is crucial for the overall success. There is no central assistance to the local authorities or to schools for this purpose, which will have to find the funds from

commented: "Lack of cash, often yery minute amounts of cash, orings our plans to a half in schools."

Richard Fothergill, the enthurector of MKP, himself ormer teacher, is all too aware of the problems. "Although many local education authorities buy bulk discounted purchases of MEP developed educational software, others do not have a central purchasing policy, and buying is left entirely to the schools.

"On the whole schools have to find the money from their own resources. Some schools have a lot of money, but the poorer the area the less money there is available, and that is sad."

and that is sad."

There are three broad prongs to the MEP's work. About 50% of its grant goes to developing software packages, teaching aids and curricula. The MEP gives grants to projects which will produce materials which can be used nationwide.

These are based in schools, polytechnies and universities.

Additional aid, worth again 150.

tional aid, worth some £150.

Fothergill says that some 40 programs have been developed a ready, which retail on average from £7 to £15, and many more at in the development stage. Commercial publishers Longman and Heinemann are involved in selfs the products abroad, and Fohr-gill is also pushing for an add-tional consortium approach for a

The MEP also backs de velopment of educational side.
Examples include a microprossor based measuring device & veloped by Leeds University which retails at £175, and "Bb Buggy", a programmable robot device developed by MEP for its BBC Computer Literacy Projet, which will cost schools about 100

Paradoxically, the more energy sive aids such as these are easing sive aids such as these are easing get into schools than chargitems. Fothergill explained: "Thy are just the sort of thing that a get Rotary Clubs or Parent his ciations to donate. The grain difficulty is to get funding it something you can't stick a able on, like a box of translators."

The exhibition of electroids and control technology developed in and for schools in Biralingham displayed a wide range of inventional control technology developed in and for schools in Biralingham displayed a wide range of inventional control technology.

in and for schools in Birminghan displayed a wide range of invativeness, and adaptability. For example, the pupils at Alser primary school in Cheshire had made their own buggy for II.

The MEP is closely concent with developing the curticular, and has regular meetings when mining boards and the universal ties. There are signs that curricular.

ties. There are signs that curicu may increasingly cover social is-plications of computers in addition to the electronic aspects. The National Union of Teachers is

been pushing for this. Some 15,000 secondary teach have taken two-day courses computer awareness, and many taking part in more extended service training courses organ by the MEP.



links shift

by Kevin Cahill

WHEN it comes to collaborative deals with Japanese computer companies, ICL is far from alone among large Western computer companies, according to Schimi-chiro Kakizawa.

chiro Kakizawa.
Speaking to the knowledge-based engineering department at the South Bank Polytechnic in. London, the Japanese technology fuurologist told his audience that the Fujitsu-ICL deal was typical of the way Japanese computer com-panies had operated since the war.

What had obscured the "twinning" process from UK eyes was the fact that most of the early deals were with American com-panies and the deals were partly aimed at helping Japan to recover from the effects of the Second World War.

Currently, there was a major shift occurring in the original armogements with Japan now becoming the supplier to the US nies from which it had initi-

ding "purchaser" of technology

from Japanese companies.

Unlike many of the US companies which did computer deals after the war, IBM went it alone in Japan, and for many years was that ountry's number one computer

A recently completed survey by the Sanno Institute of Business Administration shows that among manframe suppliers, IBM is still aumber one in terms of value of equipment supplied, although the company has lost market share of 3.8% since last year, while rivals littleth and Fujitsu have both incressed market share by a little more than 1% each. In terms of installed base units

Fujitsu came top, with 1,391 machines while IBM had a mere Kakizawa says that regaining

Toskiba (IC, LSI) Mataushita (next IBM PC) Hitachi (Inser printors)

Sanyo (robot arms)

mese suppliers to IBM.

NEC (IC,LSD

Reson (printers)

TRK (printers)

The Japscam scandal took place California and resulted in Hitahi being fined the paltry sum of \$10,000 for stealing secrets from

commentators chose to see the court case as a deliberate attempt by IBM to hurt the competition b

According to Kakizawa, IBM vill work hard to mend the fences it has unwittingly broken: IBM still staunchly insists that the case was brought on the wholly justi-fied grounds of defending itself against unfair activities.

But many observers, including Kakizawa, expect IBM to treat Hitachi with considerable care over the civil suit still outstanding between the two companies.

However it is the table of Japa-nese suppliers to IBM which aroused most interest among Kaki-zawa's audience. Apart from the fact that the list includes just about every major Japanese computer company, it also includes Hitachi

Kakizawa had included subsequently announced deal be tween IBM and Matsushita which was widespread news since early last year, despite several denials

latively new deals between US and Iapanese companies. As he pointed out, there has been a recent drift towards a change in old relationships exemplified by the links between Hitachi and Bur-roughs and Mitsubishi and Uni-

In the post-war arrangements, the Univac presence in the Japanese computer industry was represented by Oki/Univac. For about four years Oki has been showing increasing signs of wanting to go it alone, although the company still supplies Univac machines.

Univac on the other hand has been effectively creating a second source at Mitsubishi for chips and

peripherals.

Mitsubishi in turn has been looking for a non-Japanese partner to replace the now defunct RCA/-Sigma deal and the company is a front-runner for a major collabora-tion with Burroughs.

Sunitemo (NEC): Trilogy (super mainframes) bish: Univac (IC, LSI, peripherals) Sharp: Olivetti (office automation) Sony: HP (microfloppy) Fullisus IBM (laser printers, discs)

Major new relationships between Japanese and foreign computer compan





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Co-op takes the 'unfashionable' path to efficiency

worse than take a close look at their data entry applications. This unfashionable part of the DP operation often escapes attention it's probably been running smoothly for a number of years, not causing any problems, and there has been little in the way of

Online applications have attracted a lot of attention and interest, but traditional batch data entry, though still for many applications the only cost-effective method, has been comparatively

In fact, however, there are significant gains in cost-effectiveness to Key-to-disc systems, for example, have gradually incorporated all the same developments in microelec-tronics technology that have had

derentit ben billion of an effet.

Many of the organisations that still use punched card equipment can now gain from a switch to keyto-disc when they couldn't before.

A case in point is the Co-operative Bank, which over the past two years has radically transformed its data enter operations.

data entry operations. The transformation started at Skelmersdale. This is the clerical and computing heart of the bank, with a mainframe installation based today on twin IBM 3031s and a 4341. The major application is the processing of customer ac-

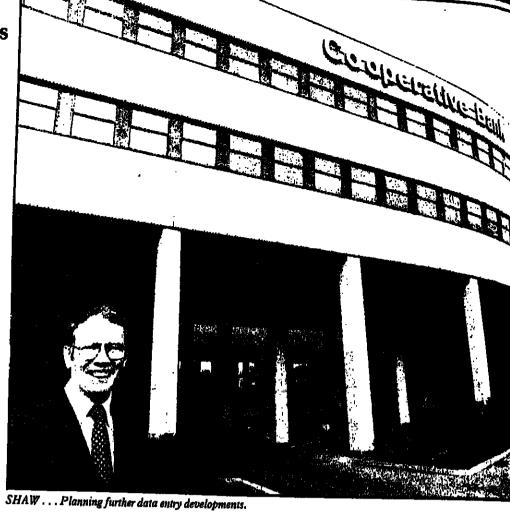
Cheque reading is done by high-speed MICR readers, but cheques that cannot be read in this way for any reason, plus all transaction documents that do not have MICR characters, were entered to the

DATA processing managers looking for increases in efficiency and productivity could do a lot significantly less than they did five this semi-automatical t this semi-automatic equipment processed all transactions but was inappropriate for capture of

> As a result, the Co-op looked around for an alternative solution and decided that the time was ripe to move to key-to-disc. The bank also negotiated the sale of what would become surplus equipment on the condition that the delivery of the new equipment would be made by a certain date. The choice of key-to-disc supplier was, therefore, determined not only by technical factors, but also by the ability to be able to deliver within the prescribed timescale.

Rediffusion Computers was the supplier chosen. The system was a twin R400/70 with 14 workstations (a duplex system was necessary to hat do not have MICR avert any possibility of downtime).

Each processor had a five Mbyte disc, and the configuration was



completed by matrix printers and a witching unit to enable a rapid changeover of processors if neces-

As Jack Shaw, one of the bank's systems managers says: "This move to the most modern equip-ment actually saved the bank money, as the rental cost of the R400 system compared favourably

Once the system was installed and processing the customer ac-count transaction documents satisfactorily, it became clear that it could also be used to increase efficiency in another area. This was
the bank's Handycard operation: a
shopper's card facility for customers that allows them to spread out
the cost of their purchase in Cooperative stores over a period of

Up to last year, the processing had been entirely handled by a bureau but a decision was taken to bring the operation in-house.

months for precautionary reasons, but was soon convinced of the

value of the system and elected to

So the decision was taken to put the processing of the credit card transaction to the Rediffusion equipment. It has, of course, coniderably increased the workload on the R400 system, and accordingly the bank has acquired an

That workload is now being still urther increased by a policy deci-tion to put all remaining data entry applications at Skelmersdale on to equipment. These are mainly lower volume applications heque book requests and the like

- previously run on various ear-lier types of the equipment. That process was completed in No-

The original cheque reject and non-MICR processing application has now been taken off the system. Barly this year the bank decided to

That meant a need for data entry system. It also meant that the previous link between the data entry equipment and the mainframes — physical movement mainframes — physical movement of magnetic tape — was too slow.

Management at the head office in Manchester needed to have access to the day's cheque-clearing data on the same day," said Shaw. As a result, the bank started looking for a system with RJE facilities.

on the same day," said Shaw. As a result, the bank started looking for a system with RJE facilities.

In the event, it was to Rediffusion that the Co-op turned again. The choice of the R400s had proved a happy one, as Jack Shaw said. "The equipment and software have proved extremely reliable. And when we have had problems, I've ilked the service. Faults have been fixed very quickly, and Rediffusion has provided a lot of helpful advice:"

The new equipment was a twin the is in have contributed the new systems have contributed greatly to the bank's efficiency. "The previous generation of data entry equipment was difficult for people to hear each other cult for people to hear each other working conditions.

"Then, because several different with more flexibility."

The new equipment was a twin the is in have contributed the new systems have contributed the new systems have contributed greatly to the bank's efficiency. The previous generation of data entry equipment was difficult for people to hear each other cult for people to hear each other working conditions.

"Then, because several different working conditions."

Then, because several different working conditions.

"Then, because several different working the intervence of the previous generation of data entry equipment was difficult for people to hear each other cult for pe

on the previous kit." The bank decided on rental for the first 12 transfer the software developed for the R400s straight over without change. The only software development necessary was on the RJE parameters.

purchase it before the 12 months The users in London enter their data or processing requirements the system, following the produce specified on the screens. The system itself formats the messes with the required send and and nation statements, and transmit them down the 9600-baud link.

The Co-op, said Shaw, is moplanning further data entry & elopments. "Another Rediffusion system, an R800, was installed tw months ago at the bank's Man-chester head office. This will be used both for RJE linking to the Skelmersdale mainframes, and for processing accounting information. The bank is also experiment

Today, less than two years after the first keyto-disc system arrived, the equipment is processing some 100,000 data entry transactions a day

ing with a Viewdata Plus system, to see how viewdata could be used to help the bank's branchet hav instant access to the mainfrant database," he said.

Today, less than two years after the first key-to-disc system arrived, the equipment is processed some 100,000 data entry transactions a day. It is difficult to give a processed to the control of the c manager for DP services, Barry Askew.

Askew.

"The workload has significantly increased, and the organisation has changed with the centralisation of the cheque clearing, so any direct comparison would be meaning less." But he is in no doubt that the new systems have contributed the check to the bank's efficiency.

SOFTWARE/MONTH

Until recently DEC saw itself as almost exclusively a hardware supplier. Now the company is concerned to improve the software of its systems

DEC's clangers on the road to better systems

been renowned for its software. In the opportunity to convert the the early days, of course, the comthe early days, of course, the com-pany never aspired to the lofty heights of software excellence: but in more recent years, under the leadership of its chief, Ken Olsen, it has shown a growing and often nothing about putting WPS improving attitude towards
systems and applications software.
On the way, it has made a few errors and dropped a few clangers.
One of the most successful soft-

were packages ever produced by DEC in WPS8, the word processing system that started life way back in the mid-Seventies on the andalone WS78 word processor. The story goes that deep within the heart of DEC, the development team behind WPS8,

successful PDP-11 range of called DECword.

If this was a solitary tale, it minicomputers. But this was

At any rate, the company did nothing about putting WPS8 on the PDP-11 range. In the meantime, the software designers had sufficient faith in their own ideas to leave DEC and form their involved in a project for the Irish own company, Data Processing
Design (better known as DPD) to write a word processor for the transaction processing system. On PDP: the product is WORD11 completion, it occurred to the UK WORD11 has become a world software team that this product

leader in word processing for the PDP-11 range, while the WS200 could be developed into a general purpose and saleable TP system has disappeared from view. But with very little effort. Work went

and has worked very well ever since. At the same time, the les-sons learnt on TPM70 were applied to some half dozen other CSS

At this point, or so the story goes, the UK project leader con-cerned flew to DEC headquarters in Massachusetts to persuade senior management to adopt TPM70 as a corporate product. But - horror of horrors! - he was merely told that another product, TPS-11, was about to be officially aunched as Trax.

The UK software team tried to persuade DEC that Trax suffered from at least two major design flaws that would inhibit its market success: first, it needed special and expensive new terminals, the VT62, and second, no other soft-ware could run at the same time.

In other words, even program development would entail shutting down the system and rebooting a different operating system. But different operating system. But DEC US was adamant, and effectively strangled further development of TPM70. This had two effects. CIR threatened to sue CSS, which cost DEC a substantial out-of-court settlement. But perhaps even more damaging, it started a steady migration of the UK team to pastures new.

Meanwhile, Trax was released with all the success of what has been described as "a damp squib". More and more software problems came to light in the field, and by the time that DEC had gained some 30 worldwide Trax customers, it had become clear that the product was not commercially viable. By 1981 DEC seems to have abandoned the product, and spent some time trying to persuade

its customers to do the same.

Trax is dead; but TPM70 lives on. It migrated with its designers from DEC to Systime, where the success partnership of the success partnership of the seventies, John Gow and John Parkinson, adopted the waif. It grew and evolved, and finally emerged as Systel, the successful Systime TP system for the Vax range of superminis.

range of superminis.

Can it be simple coincidence



Olsen's DEC is giving software greater attention



PARKINSON . . . Adopted TPM 70, renamed it Systel and turned it into a success.

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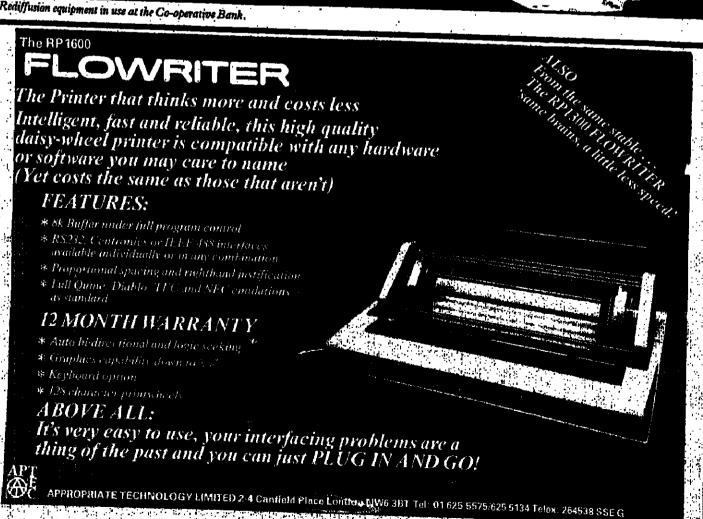
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DEC is a front runner in the personal market

Company aims to be the leading source of micro applications software

AFTER the initial "toe-in-the-water" launch of the Robin personal computer – a VT100 terminal with a processor transplant – with the addition of maths.

This time between DEC has combination the machines. It is a direct lineal descendant of the WS78, still running the original WPS8 software, but to the system. The processors concerned are the Z80 and the 8888, a combination that provides improved the combination of the WS78, still running the original WPS8 software, but the system. The processors concerned are the Z80 and the 8888, a combination that the combination of the WS78 software in the constant of the WS78 software. DEC has finally emerged as a leading contender in the personal computer marketplace.

The three major products, initially launched in the summer of any faunched in the summer of 1982 and effectively re-launched in January 1983, are finally appearing — and selling. In fact, Hamilton Rentals, a UK company that has been specialising in DEC word processors since 1977, has just announced that it is the first of a nounced that it is the first of a small number of dealers signed to handle the DECmate II, and that within days of signing the agree-ment, it had already sold the greater part of its initial stockholding to Rothschilds, Citibank, Shell

In many ways, the DECmate II is the least interesting of the new

This time, however, DEC has paid cursory homage to the current vogue for "convergence" in small systems: not only is it a word processor, but with the addition of a Z80 board it can become a CP/M micro as well. The concept, of course is little different from many other new micros that concentrate on one processor but also provide the option into the software library of another. The primary processor for the DECmate II is the 6102; a

PDP-8 on a chip.
It is the Rainbow, and perhaps even more so, the Professional personal computers that are provoking most interest at the moment. Both have new and exciting fea-

The Rainbow 100 is another

combination that provides immediate access to the vast majority of minicomputer software running under the CP/M, MSDOS and

CP/M-86 operating systems. Both unlike most other systems, the Rainbow's processors are not user selectable: both are used automatically. In fact, the two processors divide the system functions between themselves: the Z80 controls the floppy disc interface while the video display, the keyboard, the I/O port and options are controlled by the 8088.

To make the most of this concept, DEC and Digital Rescarch collaborated in the design of a new operating system: CP/M 86/80, a hybrid 8-bit CP/M and a 16-bit CP/M 86. It includes a fea-

sense," a function that allows either 8-bit or 16-bit CP/M software to run without any operator

The CP/M 86/80 operating system itself determines whether the applications package be an 8bit or a 16-bit program, and then executes the instructions with the appropriate processor and operat-

Paul Bailey, director of European operations for Digital Research, pointed out that DEC is one of the first companies to implement 8- and 16-bit applications in the same box. In this case, the implementation is a standard part of the product - the user doesn't have to buy, say, a special

"I believe that DEC followed this trend because it recognised the Turn to Page 19



CATTELL . . . "MSDOS will also run".

Buying to Sell?

An important conference for companies buying products to sell on to the user

The Computer Trade Conference is a vital opportunity to learn how to buy in systems, software and peripherals and sell them

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Make a date to share the experience of suppliers and vendors alike.

PROGRAMME TUESDAY, APRIL 26

09.30 Registration and Coffee.

10.00 What hardware should you sell?—the amount of technology on the market is bewildering. What products and types of devices are here to stay, and more importantly, which can make money for you?

10.30 What software should you sell? — it is tempting to go for the established products such as CP/M, Wordstar and Visicalc. But is this the

11.00 Who should you sell to?—are vertical markets the way forward, or is a more general approach to marketing called for?

Support — how much should you give? — are cut prices and a cash and carry attitude preferable to comprehensive user support, or is

12.15 What a software house looks for in a dealer? — a leading software house explains its selection criteria for the organisations which will

14.00 Selling and licencing through large manufacturers—you may have a product needed by a major computer company. How should

Dealing with the majors 1 — ICL and the Traderpoint scheme.

15.00 Dealing with the majors 2— IBM and its attitude to third party vendors. A rare chance to get behind the facade of this enigmatic glant.

15.30 Dealing with the majors 3— DEC and its authorised dealer scheme. The world leader in minicomputers talks about selling for them.

WEDNESDAY, APRIL 27 Registration and Coffee

What's new? — hardware developments—an overview of the current state of the art. Everything you ever wanted to know about micro floppies, low cost printers, Winchesters and local area networks.

What's new?—software developments—database management, operating systems, and the latest trends in applications software

Putting it together—the problems of plug incompatability—what fits with what, and what won't. A look at putting together

11,45 Marketing your own product—a software house case study. A behind the scenes look at how to do it right the first time.

12,15 Selling yourself—how to get your name known by the right type of customer. The power of advertising should be working for you.

ore the man in the street, a case study — home computer users are becoming more sophisticated. High volume, Low cost phoducts may be right for you.

14.30 Selling into business: a case study — higher unit costs appear attractive, but is the commercial user a tougher nut to crack than the 15.00 Selling a US product in the UK—there's a vast pool of packages across the water. How, and why, you should sell them to the British

15.30 A future look - where will you be in a year s time.

deese indicate which sessions you will be attending

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Operating systems face major change

THAT Digital Equipment has never been renowned for the success of its software is a view shared sor overheads." cess of its software is a view shared by Philip Stephensen-Payne, a technical software consultant with DEC OEM, Systime. He said: "Ever since the PDP-8 days, DEC has been producing come of the has been producing some of the best minicomputers available. From the point of view of hardware alone, the PDP-8, PDP-11 and Vax-11 ranges are superlative, both in terms of flexibility and reliability.

"If anywhere, DEC tends to fall down rather more on in sector

down rather more on its software, in terms of operating systems, seven years ago DEC had fairly well-defined operating systems for the PDP-11, each for a particular class of user (RSTS for the commercial world, RSX for the scientific world, and so on), but as time mercial world, KSA for the scientific world, and so on), but as time went by, the operating systems began to merge together as RSX began to have time-sharing features and RSTS began to allow real time

While this flexibility was very nice in many ways, it inevitably led to all the inefficiencies inherent in

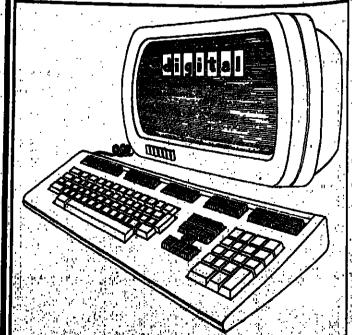
Clearly, this is a situation that:
DEC itself is none too pleased
about. For its newest large system

the sources.

In the beginning, this caused considerable problems for the software houses, particularly while the first obscure VMS bugs were dis. More recently life has become essier with the release of the VMS Internals manual. But Stephenser-Payne laments that "many apen of VMS, such as tuning, are sill only manageable by a VMS Winard".

DEC itself sees things dif-ferently. Martin Lomas, a VMS marketing specialist at Resding, claimed that "VMS was designed to be available as a multi-user,

Turn to page 19



operating system, it seems to have taken two new steps. First, there is now just one system for the Varange, VMS — as opposed to the variety available for the PDP, range. Second, DBC has withheld the sources.



Prachites managing director John Hale whose company has signed as a DEC software supplier.



Range of micros ties in with big machines

large amount of good 8-bit soft-ware which is available. Having decided to follow the route of dual architecture, Digital Research proved to be the only company which should offer an operating system for their machines." This, of course, is not quite true in de-tail, for as Lawrie Cattell, DEC's UK small systems business manager, confirmed recently, "MSDOS will also run, and will be available in March."

To support this and the Professional PC, DFC is establishing a national network of dealer outlets throughout the UK. Ian Waring, UK dealers software specialist, confirmed that "there are already 55 dealer outlets in this country, ranging from Computerland to the Xerox store. By July, we expect to

Underlying the whole market strategy for the new systems is the Digital Software Catalogue. Back in April 1982 the company first mounced its intention to become the world's leading source of applications software, under the banner of Digital Classified Software

In January of this year Mark Wright, applications products business manager, introduced the first edition of the Software Catalogue with the assurance: "All the software included has been personally evaluated by our own software engineers ..."; which makes the Digital Classified Software a more ambitious project than many of its rivals.

The first UK DCS agreement was signed in the summer of 1982 between DEC and Peachtree. At the time, Wright said: "It is important for our customers that they have a fully integrated family of business software and Digital is pleased to recommend Peschtree's oftware to meet this need. Peachtree's software is recognised as well established, reliable and has the

requisite functionality."
Of Micro Focus, perhaps the UK's best known micro software producers, he declared: "Some of the more sophisticated applica-tions in the DCS catalogue are written in Micro Pocus Cobol and we are pleased to offer the whole Micro Focus products for the DEC family of personal com-

On the importance of the DCS agreement with DEC, Peter Hewitt, marketing manager at Micro Focus, explained: "Level II Cobol is the only Cobol for the Profes-sional models, It is the only software that offers compatibility with the CP/M and CP/M-86 environ-ment on the Rainbow, on which it

total source code compatibility for applications on either range of equipment. As DEC will also be selling CIS Cobol on the Robin and DECmate II there is a clear growth path for Cobol users from the smallest DEC personal computer to the top of the range."

The top of the range is, of course, the Professional 300 series, comprising the 325 and 350 models, and claimed by DEC to "contain a 16-bit PDP-11 minicomputer. Both include 256 Kbytes of main memory. Each system includes a diskette drive with 800 Kbytes of the system includes a diskette drive with 800 Kbytes of the system includes a diskette drive with 800 Kbytes of the system includes a diskette drive with 800 Kbytes of storage capa-city on two 51/4-inch diskettes." An integral 5 Mbyte Winchester disc is one of the main options.

Back in April 1982 the company first announced its intention to become the world's leading source of applications software, under the banner of **Digital Classified** Software

The main interest of these systems is in the architecture and operating system. Cattell told us, "The processor is the same as the PDP-11/23 – an F11 chip. This, coupled with the new operating system, P/OS gives a great deal of compatibility between the Professionals and the PDP-11 and Vax ranges. It is based on RSX-11, and provides identical file structures. It is a single-user, multi-tasking system with in-built functionality

and diagnostics."

In the end, theory must be substantiated by fact. Xoren Computing is one UK company that has already tested this claim, and managing director John Jarvis told

us about the experience.
"Xoren has a product called IPL11. IPL stands for Inter-Processor Link; the package enables files to be transferred from one computer to another over a telephone line (or a direct line, if the computers are close enough). Versions of the package already exist for most DEC operating systems, including 'RSX-11M, VMS, RT-11 and Decree

"At first sight, there seemed good chance that the package could be adapted to run on the Professional 300 series personal culty. At the hardware level, the processor is the F11, also used in the PDP-11/23, and the screen is a VT102. There are significant softfessional run under a new operating system called P/OS. However, although P/OS as a whole may be new, large parts of its have a fami look to those who know RSX-11M. POS was in fact derived from RSX-11M Plus." Jarvis concluded: "The conver-

sion of IPL from RSX-11M was not without its interesting mo-ments, but probably only slightly more difficult than the corre-sponding conversion from RSX-11M to VMS which we made a few weeks ago."

Not everyone, however, is totally enamoured of the new Professional. Eavesdropping at a re-cent DEC US presentation on the 350 we learnt the following points: The terminal attached to the PC350 is dumb. Everything it does, including flashing the cur-sor, is performed by the Terminal Firmware task that sits on top of the Terminal Driver. This produces a heavy overhead on processor. The use of memory appears to

be the main query hanging over the 350. Of the 256K available, about half is used by the P/OS operating system and the Terminal Firmware task. Furthermore, software running on the PC will prob-ably be linked, at least, with RMS, FMS, Graphics routines and a language specific OTS — each of which (other than FMS, which is a memory-resident) is implemented as a cluster library.

Once all of these have been

loaded, there would appear to be little room left for the application program. The result is that even in a single-task operation, the 350 spends much of its time swapping library routines in and out memory. And because of this, it is aiready rumoured that DEC soon will change the F11 (11/23 chip) to a J11 (11/70 chip).

For a final word, we asked David England of DM England and Partners, for his opinion of the new DEC hardware and its effect on the market. "For a software company," he replied, "the advan-tage is the breadth of the DEC range of compatible equipmen right through from the Profes sional micro to the large Vax main frames. For example, our Fina (financial modelling and analysis system) offers identical facili les across the entire range of DEC equipment. This greatly simplifies the problem of support. We see P/OS RSX-VMS as a remarkable growth pattern for mature users of

DEC moves towards standardisation

aich and real time system. While ut and real time system. While it can be tuned, to a degree, to be more suitable for one or the other, more users need all three applications. As a multi-user system, it can support between one and 100 soint terminals at a real state. edite terminals at any time, de-pending only on the processor and application. As an operating specific terminal terminal terminal terminal terminals are several terminals of making the several angles for the d making the system easier for the user. "The system easier for the user. "The system itself," he clacy of system use."

"In general," he concluded, wrote the American magazine conversion utilities already avail"VMS reflects DBC's strong Computers - R - Digital. This able: moves towards rationalisation, standardisation, and compatibil-

The instruction set for the en-tire Vax range is fixed. There is just one operating system for the whole range. It allows us to concentrate our support expertise to the advantage of the user. In one sense, it is the sum total of all we learnt in the PDP-11 range."

and it just grew and grew. Two years ago it was thought to be dead, but the user base was too strong.

But now there is likely to be

It is perhaps this avowed move towards standardisation that has caused continued fears that a number of the PDP-11 range."

Answering the criticism that DBC has hever released a viable distribute towards standardisation that has caused continued fears that a number of the PDP-11 operating systems are to be abandoned. Indeed, throughout 1982 it was rumounted that the concept of multi-approximately less important mounted that DEC was about to kill off RSTS – and perhaps Mumps as well — but this ignored the temporal properties of the requirements for US.

was confirmed by Ron Fernandez, a RSTS software support

"RSTS is very much alive," he said. "It was originally designed for the education environment, but then commerce got hold of it and it just grew and grew. Two

strong.

But now there is likely to be another major release in the near future. RSTS version 8 is already out on field test."

It may not, however, simply be the strength of the RSTS support club that maintains its existence for the time being at least DRC

"The main problem," he said, "in moving from RSTS to VMS is calls to the instruction level of the processor, and the end result simply not compatible with VMS."

Perhaps the final word should be left to the American manuals which ease the migration path via both technical information and public relations (you really did want a Vax, you were just too scared to admit it), from RSTS to

ered a replacement and not just a supplement. It is a dual concept, to allow those systems that outgrow an 11/70 to migrate to off RSTS — and perhaps Mumps as well — but this ignored the remainder of the requirements for the time being at least, DRC will obviously want its PDP-11 that outgrow and 11/70 to migrate to users to migrate to the Vax range, both staff and software of but there is, as yet, no easy conver to both staff and software in hardware, and more expensive in also explaining that these are some software than a new 11/70."

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Last year Computer Weekly published case studies on

software development tools.

Cincom's Mantis and UFO.

Constructors, describes his

company's experience with

users and DP personnel arrive at a better understanding.

THE INTRODUCTION of Map-

per to the John Brown Organisa-

tion happened some two years ago, but in order to understand its im-

put on the environment into

which it was introduced it is neces-

ary to begin this story two or

procurement and construction of petrochemical, and oil and gas installations both on- and off-shore

broughout the world has created a need for sophisticated manage-ment systems - systems which

three years carlier.

Sperry Univac's Mapper

system which has helped

users of two advanced

Here, John Wilkinson,

manager of materials and

project systems at John

Brown Engineers and

SOFTWARE MONTH!

difference being price and user friendliness. I thought of financial planning packages as being less user friendly, and more expensive due to the custs of sale and support in the DP environment. Spread sheets, on the other hand, seemed to be the cheap and cheerful micro (as Micro-FCS) and Comshare is

It turns out that this view is absolutely incorrect. l'inancial planning systems (culled FPS from now on) are far more powerful than spread sheets, although they address the same kinds of question. As their experience grows, many spread sheet users find themselves needing the kinds of facilities FPS can offer. As far as case of use goes, spread sheets are somewhat casier to learn - but users are soon forced into intellectual gymnustics to do what they

Price difference, too, is not necessarily large. You can buy an

Separate Ways to still have a rather different culture, and recently I found myself wondering about the difference between financial planning systems (mostly mainframe affairs) and electronic spread sheets the financial planning area include products like FCS, IFPS, and Empire; while leading spread sheets in the financial planning area include products like FCS, IFPS, and Empire; while leading spread sheets include VisCale and SuperCale.

At first, it looked us if the two types of product provided more or types of product provided more or less identical functions, the main

nance, also known as MicroModeller. Also, vendors of mainframe and mini-oriented products are bringing out micro versions. Mar-ket leader FCS is now available offering its Target system.

The first difference you notice

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between FPS and spread sheets is that the way you go about doing things is different. With spread sheet, data and formulae defining cell dependencies are directly added into a blank electronic spread sheet. The financial model and its data are locked together. When viewing the results, users are forced to look at the spread sheet in a way closely corresponding to how it was defined.

With an FPS, however, there are clear demarcations between de-fining the financial model, entering data for the model, processing here for bigger profits in

sults. In one mode, spread sheet and cell interdependencies are defined. In another, sets of data to be input are defined. So it's easy to define a number of different sets of data representing different what-if circumstances, and feed these separately into a previously defined central model.

In the processing mode, what-if sets of data are then applied to the model. Here, everything a spread sheet can do, FPS can do better by and large.
Lastly, FPS offers sophisticated

ad hoc report writing facilities.
Aside from these general differences of architecture, there are many other differences between spread sheets and FPS. Some of ne most important include: Model size. Models soon become too large on a spread sheet. Support. FPS vendors generally provide users with classes and a

Programmers' front end. FPS models can be presented to users

Auditability. It's much easier to determine how a model is defined Learning time. Spread sheets are

via a turnkey front end.

easier to learn. Processing. FPS have advanced and very useful processing facilities, such as risk analysis, sensitivity analysis, hierarchical consolidation, statistics and forecasting,

linear optimisation and 'goal

Put crudely, FPS are for people enthusiastic spread sheet dilettante myself). Since the two types of product address similar problems, t's reasonable to ask whether time will permit spread sheets to catch up with FPS functionality. Will

The correct answer is an equivocal one: in some ways, yes, and in On the one hand, spread sheets

are definitely getting more sophis-ticated, as a result of user de-FPS developers are also learning

from spread sheet technology. In particular, some of the more elegant characteristics of the micro

world are being incorporated.
Over the long term, differences
are likely to remain. There will who take their modelling seriously, while spread sheets are for the dilettantes (I say this as an planning simply never need -multi-dimensional, multi-currency consolidation of international subsidiaries, for example. Al-though there are relatively few such users, they can justify paying

and London. Covering while of marketing issues, he enim

a high price for the cum f tionality.

So it looks as if 10 years for now, the market for finns planning packages will still on a two types of product: chesp, me market packages with capabilist lying between today's FPS at spread sheets and ulm-spiticated, feature-laden FPS and ing the top management of lan

ROUND UP



MSA takes \$100 million

MANAGEMENT Science America has become the first inde-pendent software company to earn \$100 million in a year. Revenues in 1982 were \$101.2 million, 38% up on the year before, and interna-tional operations manager Michael Hunt says that the company is looking to increase the growth rate to 50% this year.

Altergo changes

ALTERGO is shaking out its top management as it centralises its operations under a new company. Altergo Information Systems. The aim is to put more emphasis on marketing, and already an American, Leonard Levy, has been appointed as managing director, while two of the previous top men Dick Jones and David Brownlee have gone.

C for CP/M

DIGITAL Research has rewritten its widespread CP/M operating system in the C language to make it more portable. This will bring CP/M into direct competition with the Unix operating system for users with machines based on 'Motorola's 68000 chip such as the Apple Lisa and Hewlett Packard's 9800 series.

Consumer law

COMPUTING services companies will face new consumer protection laws this July under the new Supply of Goods and Services Act which will extend the powers of the present Sale of Goods Act from products to services. "This could have significant impact because at present disputes revolve largely round the wording of contracts," says Doug Ryelons, director general of the Computing Services Association.

Export critics

SCICON managing director We ren Werblow has joined the man critics of the UK's software or ports record. Government and take its share of the blame, head, for paying too much attention a attracting overseas companies set up in our £1 billion homemer ket, but neglecting our cross, which are currently running at a

Microsoft moves

MICRO software supplied Microsoft is shaking up its European operation by spirits Microsoft Europe into three con-panies based in the UK, Frank and Germany. The post of European director of marking held by Chris Gare vanishs accordingly and Gare has been to placed by ex-Commodore man David Praser in the UK, Benssi Bergnes in Paris, and Joschi Kempin in Munich.

Taxing times

VAT demands forced the Data General specialist software hose Computerplan to wind up and a sume trading under the title of its

On target

SOFTWARE house Cullinate L tabase Systems enjoyed a revolu-growth of 57% to over \$34 million in the six months ended Octobe 1982. This was well in line was the annual goal of 50%.

DEC R&D centre

UP TO 300 jobs will be created in the UK during the next four year as Digital Equipment builds it. first research and development centre outside the US. Dark Barbe, managing director of DE UK, said the UK was chosen for the Country in the £7 million centre because software technology was at good anywhere.



who day to day routine work, shhough there was still a requirement for specialist personnel to havide the more complex systems seeded to analyse the vast store of the which was being created.

Ren in 1982 the data was still rend tanalysed and used by accountants and operating persons, but the methods of processing had change and it is these considerably and it is these discarding which are of particular integrations.

ements. There was still a con-

suge Processor) became available which allowed the user to interro-

limit the reliance on programs

for the day to day routine work,

by the summer of 1981 much of the project data was computerised and the summary now wanted it

wanted the base information required for plant maintenance. The basic philosophy of these requirements had been defined and programming was about to start when Mapper became available. The requirements demanded re-

'them' and 'us'

programming could be based. A lot of data checking would be required to ensure that the demands had been correctly met. But Mapper solved some of these problems overnight and provided other facilities as well. Mapper provides the means for each user to manipulate his own data using simple lan-guage and very little training is required to reach a reasonable level of competence. It provides easy access to the whole of each file held, and allows the user to roll through files and update the data on a real time basis. John Brown Engineers and Constructors are part of the engineering and construction division of the John Brown Group. Their involvement in the engineering.

These facilities allowed files to

The purpose of Mapper

MAPPER stands for MAintain, Prepare, Produce Executive Re-ports, and is now used extensi-vely by John Brown Engineers & Constructors on the Univac 1100

require computers to provide the means of simplifying complex manual operations. Four or five years ago this need was primarily met by systems of the batch process card input variety. Not particularly unique, but to appreciate the impact of Mapper it is important to understand the purpose and uses of these original It is a means of utilising main frame capacity via remote termi-nals for instantaneous response covering a whole range of activity from SHARCH, SORT functions pose and uses of these original more difficult RUN DE-VELOPMENT.

By January 1978 the company was very much involved in the Sul-It eliminates the lengthy dialo-gue phases with systems analysts and programmers by providing the operation staff with sets of on Voe oil terminal project. John Rown's contribution was the pocess plant and in order to re-duce the number of expensive man simple English language instruc-tions facilitating use by all grades of personnel from non-technical cierical through to senior man-agement and directors. hours required on site the concept of modularisation with offsite fab-

riculon was adopted.

The materials for the modules would be distributed from a central washance. The increased data respon ness to user needs and the ability for questions to be asked which tal warehouse and it was this dudbution and the subsequent were not previously anticipated accounting for materials used makes it popular at all levels. Creation, maintenance and maniwhich was of particular concern in pulation of data to provide John Brown already operated Cobol-based programs for the control of materials which with some modification could be admind to materials. prompt printed responses en-hances its value to both IBEC

and its clients.

The production of customised reports within a total security environment is obtained via the siadspired to meet the immediate reductionts. There was still a con-siderable programming require-ment, however, which continued for most of the project and the quantity of data generated resulted in the creation of 15 major data-bases. location of a unique password mechanism, through Mapper co-ordination which prevents third parties from acquiring access to exclusive data, and restricts staff

quired by the operators and accountants. The importance of this The requirements demanded recoding and recreation of files and there were no easy rules on which programming could be based. A lot of data checking would be required to ensure that the demands This was the beginning. It was clear to all that we now had a tool in our hands which would make it

date as well as create the data re-

very easy to process and manipu-late large quantities of data. The speed with which information banks could be set up and used depended more on how fast data could be typed rather than how quickly programs could be pro-This ability of users to produce

visible results without waiting for their requirements to be interpreted has an even more impor-tant effect. It changed attitudes to the computer. Scorn and derision turned into praise and enthusiasm.

The black box became understandable and people wanted to be involved in this exciting de-

Site staff designed systems to control work and assess progress, engineering departments compu-terised schedules of design data and set up drawing control procedures, administrators' input man-power loading records and cost controllers used Mapper as a real time working document.

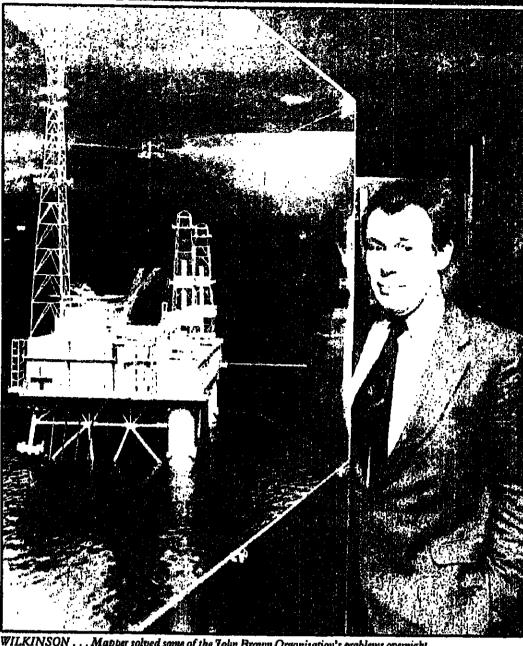
These are just a few of the uses

to which Mapper has been put by John Brown personnel since it became available last autumn. There are now over 140 registered users for the facility who have either had files set up by the Mapper co-ordinators or at least are showing considerable interest. A user group has been formed on which all users and the DP department are repre-sented and via which problems and relopments can be aired and

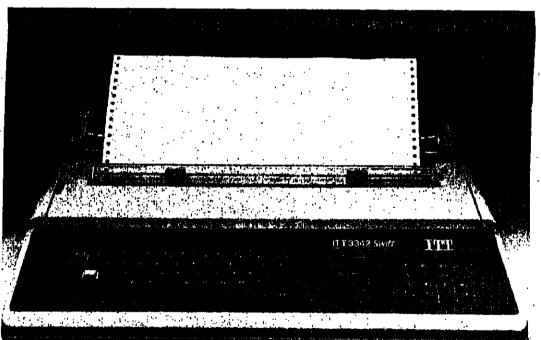
The rapid development of Map-per use in John Brown has shown how eagerly people will accept systems or facilities over which they have a more obvious means of

Up to now there was a "them and us" world of DP personnel and users with little cross fertilisation. The barriers are now coming down. Mapper is providing the means by which users can achieve relatively instant success in setting up systems for their own use. But work must be co-ordinated and this is where DP personne have an important part to play. When the user has got what he wants DP can help to improve how ensuring that one user is not duplicating the work of another.





. Mapper solved some of the John Brown Organisation's problems overnight.



SPECIAL OFFER. £200 off the high performance Swift KSR dataprinter-offer ends 31st March 1983.

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K

Measurement system with a wide range of interfaces

MEASUREMENT Systems an channels to be addressed by the nounces the release of the Trojan system.

The heart of the system is the vides a wide range of analogue and digital interfaces to a powerful

Trojan is a bus oriented system providing significant expansion in terms of real world interfaces. It is supported by up to 12 different-plug in boards including high per-formance/analogue input, digital 1/0, analogue output, expansion memory board, RS232, tal 1/0, analogue output, expansion memory board, R\$232, digital 1/0, analogue output, expansion memory board, R\$232, IBHE etc. Fifteen available user alots permit analogue expansion to alots permit analogue expansion to up to 80 channels of input in the one enclosure. Local or remote scanning units enable up to 256

sition System. Designed for the professional user of microcomputers in measurement and control environments, it offers a low-cost environments, it offers a low-cost environments. measurement system which pro- on-board languages for non-volu-

tile application programs.

Trojan offers an option of two high level languages either Basic or | now in production.

Forth.

Data and program may be stored on the integral 514-inch DS/DD disc.

Typical applications for the intelligent display controller family include automotive instrument clusters, interactive terminals.

Displays are provided either in the form of an integral 40 character

Measurement Systems (CW), Mill Reef House, 9-14 Cheap Street, Newbury, Berks. Tel: (9635) 45420.

Non-stop,

printing

Easing the lot of civil engineers

SIA Computer Services has announced a new labour-saving

program for civil engineers.
Bard, a computer aided method of producing reinforced concrete detail drawings, allows civil engineers to produce high quality A3 drawings by means of a plotter, at an economic cost, says SIA.

The reinforcement drawings produced are made up from a

The reinforcement drawings produced are made up from a number of standard components selected by the user and assembled by the program. Bard produces drawings in accordance with the requirements of CP110:1972 "The Structural Use of Concrete", RS4466 (1981) and "Sinndard Reinforced Concrete Details". The Concrete Society, 1973.

Developed at the Cement and Concrete Association, Bard recognises the advantages of a reinforced concrete drawing as pro-

miss the advantages of a reinforced concrete drawing as produced by an experienced detailer, and has been developed to allow the same freedom of choice available in the manual method. Bard, however, is claimed to save time and effort by allowing interactive input of dimensions, ampries coninput of dimensions, support conditions, reinforcement types and arrangements etc, which are then automatically checked for compilance to standards.

Familiar users may enter data in shorthand, thus saving even more time, and common data lems; such as the firm's title block, curtailments, and lengths, are stored on standard files to be tailored and used as required.

In the case of reinforced concrete columns, up to four different members are shown on the

SIA Computer Services (CW), Ebury Gate, 23 Lower Belgrave Street, London SW1W ONW. Tel: 01-730 4544

Big savings claimed for controllers

THREE new intelligent display controller ICs that interface with a host computer and provide direct drive for vacuum fluorescent displays are now available from Pelco Electronics.

Designated the 10941, 10942, and 10943, these devices can provide 16 segment, 5x12 dot matrix and bar graph control for up to 80

By integrating display data processing, character decoding, and display drive in the ICs, considerable cost savings can be achieved in displays using ten or more characters, compared to the use of other MOS-bipolar display controller techniques. controller techniques, says Pelco.
The three new devices double

the number of products offered in Rockwell's family of intelligent display controllers. The initial family members, 10937, 10938 and 10939 were introduced in the third quarter of 1982 for segmented and 5x7 dot matrix displays and are

clusters, interactive terminals, typewriters, telecommunications industrial automation,

By providing a simple interface both with the host computer and the associated display, the intelli-gent controller family offers signi-

ficant advantages over older approaches that employ TTL devices, says Pelco. Among the claimed benefits of Rockwell's intelligent display controller ap-proach are reduction of operating time required of the host computer, less display overhead electronics, simplified system design, less board space for the display control function, reduced power and cooling, lower overall installed cost, and lower maintenance costs.

Rockwell 10941 when used with the 10939, will drive up to 40 characters of a 14 to 18 segment display containing a decimal point and comma tail. It is also capable of bar graph control. The device accepts TTL-level, serial or parallel inputs up to a 1 KHz rate, processes the data, and then supplies direct drive for VF display digits and

Pelco (Electronics) (CW) 26/27 Regency Square, Brighton, East Sussex BN1 2FH. Tel: (0273) 722155.



Tables for terminals

TERMINAL work tables which combine a grained wood look with the hard-wearing properties of vi-nyl have been introduced by Hamilton-Lines.

The tables are available in teak, sapele or white laminated finishes. They have extra worktops which can be attached to either side and

Hamilton-Lines (CW) Southern Cross Trading Esta Bognor Regis, West Susser NZ 9SB. Tel: (0243) 828921.

Low-cost colour video graphics controllers

NON-STOP printing is the claim made by Trilog for its new TIP range of line printers.

The printers run with two print heads. If one fails printing continues at half speed on one head. A replacement can be fitted by the user. The printers are designed to and software configurations to meet the varying needs of the end

In addition to being offered as a complete video controlled subsystem the video circuits are to be made available on standard bus

user. The printers are designed to work eight hours a day, five days a week. The ribbon life is put at 200,000 lines. Trilog (CW), Unit 1, Nimrod Way, Nimrod Industrial Estate, Reading, Berkshire RG2 9EB. Tel. (0734) 868147.

Alphameric's new industry standard keyboard.

board has a basic 83-key layout which can be modified by the addition of up to nine extra keystations.

The additional keystations can be snapped into place and a simple software package takes care of designations, says Alphametic.

Complete flexibility is ensured ture.

The standard software package allows the keyboard to work in any of three different modes, qwerty, qwertz and azerty. These modes are selectable by the host processor via the bi-directional 4-wire serial port.

TIL level serial output is standard testing.

merio.
This new industry standard key-

above and the ment of the last them of

A RANGE of high definition colour video graphics controllers is launched by Europel Systems.

The Europel video graphics controller is a single PCB which functions as a complete self-con-

functions as a complete self-con-tained high definition colour graphics computer system. The controller is available in hardware

The Europel system has a single card controller rather than the normal rack system. It is also easier to use at a much lower intial cost, achieved by the wide scale use of

pleted by ongineers in under two years from its inception. Europel has received an order for 1,000 of

There is a "tailor made" range of supported software available for users wishing to implement their own specialised functions.

A wide variety of applications are obtainable with the Europel colour video graphics controller to the following industries: Computer, electrical, control industry, whitening sixens and applications and applications are supported to the colour state of the colour st shipping, aircraft, engineering and amusement machine manufactur-

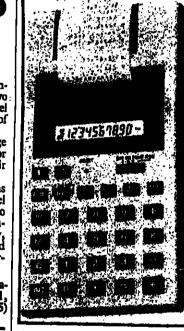
Europel Systems (CW), Craven House, Craven Road, Newbury, Barks. Tel: (0635) 31074.

supply only is required.

Alphameric's capacitive key seasing arrangement, coupled with careful bearing design ensures individual key lives in excess of 100 million (10?) operations per key, says the company.

says the company.

Key pre-travel is 2.8mm; total
key travel is 4.5mm and operating
force per key is nominally 55
grams.



Casio's impact printing calculator.

Calculator with impact printer

CASIO HR1 is a new lightweight portable calculator with liquid crystal display and the option of printing on standard paper rolls -full character impact print, not

mosaic or thermal effects.

Overall size is a handy
32x82x160mm, weight 295 grams.
Power comes from four AA size
manganese batteries giving 4,300
hours continuous operation in
display only, or some 9,000 lines of
print (20% improvement possible
on superior power cells). For static
use, operation from AC mains
adaptor is optional.

Calculation abilities are the
usual four functions with auto-

Systems Reliability describes in latest system as suitable for said to medium-sized PABX interest to medium-sized page in the said t tions starting at about 75 lines, 10 to a maximum of 400. usual four functions with auto-A hotel management verse, the Hotel-Tag 600, keeps a prose expenditure check on all calls for guest rooms and staff enclosure in hotels of up to 600 rooms. matic accumulation, direct access to memory, and multi-function

Key pre-travel is 2,8mm; total key travel is 4.5mm and operating calculator has a recommended reforce per key is nominally 55 grams

Alphameric Keyboards (CW)
Manor Way, Old Woking, Survey, Teli (04862) 71555.

Alphameric Co. (CW), Unit 6, 1000 North Circular Road, London NW2 7JD, Tel.; 01-450 9131. Systems Reliability (CW), Marshall House, 24-26 Pottess Road, Luton, Bedfordshire

Keeping down the phone bills

KEEPING phone costs when managements like to see them at the lowest possible level - b difficult problem when using sep-matic outside dialling system, at needs vigilance of a special kind.

hensive management report, which can be formatted according to need, provide the information which managements require to troduce greater efficiencies.

Prices for Tel-Tag begin

about £5,500.

The latest in the growing It Tag range is the Tel-Tig & Series, designed and manufacture by Luton-based Systems Reliability for use with small to make a speed SPC exchanges or by use sized SPC exchanges or with conventional election mechanical PABXs who may

considering changing over to St.

The Tel-Tag 400 Series are relatine systems which identify it originating or called extense numbers dialled, precise that of call and its duration. As well as detecting the south of unauthorised calls, the equipment gives a complete breakdown of the time spent on the phoar, the length of time taken by switchboards to support, which Specialised cleaning

switchboards to answer, want extensions are under- or over all ised, and the costs and who is materials originating them.
Tel-Tag's "watchful eye" allow no activity that is unaccounted in thanks to the advanced technology of the system and the compressive programs developed and maintained by Systems Reliability

If AL Computers has been appointed main agent in the UK for a comprehensive range of computer chaning products manufactured by Automation Facilities.

The range of new products includes specialised cleaning materials for general external surfaces, top drives and heads, disc packs, cartridges and drives and VDU screens. These consist of a variety of serosol sprays, lint-free cotton squares and cloths, spatulas one of the most includes.

MORE efficient plotting of graphics output is offered to Prime computer users by the printer plotter manufacturer Versates with a new release of its Versaplot Random software.

The package cuts the amount of data needed for sample plots by up to 20 times. It also gives users access to high-speed electrostatic plotting while using no more processor power than slower pen plotter technology.

The software organises plotting

one of the most innovative products is the Floppiclene floppy data in elements rather than in random format. An element might be a 'move and draw' request, a size or angle definition, an area specification or a description of a space to be filled in.

National open and cloths, spatulas plotter technology.

The software organises plotting data in elements rather than in random format. An element might be a 'move and draw' request, a size or angle definition, an area specification or a description of a space to be filled in.

Versapitor Random runs under Prime's Primos operating system.

Ecupan (CW), PO Box 40, Hertford SG13 7HE. Tel: (0992) 552426. Access to high speed

printer and called up by entering simple numeric codes. Other in-

formation such as product weights

or descriptions and company logos can be stored or taken from a separate device if necessary and printed at the same time.

The Flexiprinter has a Zilog Z80 processor and between eight and 48K of memory. It prints at two



Not just a pretty face . . . Miss World, Mariasala Alvarez Lebron, has been signed up by Epson to advertise its products. Here she is showing a printer sub-assembly.

Setting new standards

set new standards among such products, has been introduced to the UK by Epson (UK), part of the Japanese manufacturer Seiko.
The new RX80 runs at 100 charcharacter Ascii sets.

Epson (CW), Dorland House, 388 High Road, Wembley,

Middlesex HA9 6UH. Tel: (01) 900 0466.

Plotting system speeds circuit board design

CALMA has developed a laser plotting system which is claimed to speed the production of computeresigned printed circuit board mages by more than 100 times.

which is being offered with Cal-ma's Cards II PCB computeraided-design system, generates images at a typical rate of four minutes per plot - between 90 and 120 times faster than conven-

according to Calma, removes many of the constraints on speed, accuracy and density normally associated with high-density photoplotting, accepts pre-sensitised media as large as 56cm×71cm, and

plots as large as 36cm×71cm, and plots as large as 45.2cm×61.4cm can be exposed.

A special carriage system moves the media to provide accurate exposed images. Precision is within 0.0254mm (0.001 inch) over the applies format.

vacuum platen that securely holds the media. Pneumatic isolation mounts are available to safeguard the optics table from ground vibra-Accuracy and precision are also controlled by the laser, which is

split into a write and reference beam. As the write beam exposes the film, the reference beam preci-sely controls the position of the In addition, a computerised scan lens accurately focuses each flash.

The system's optical elements contain the necessary micrometer adjustments that align critical com-ponents within the required Calma says that innovative and

exclusive features allow plots to be produced with dense circuitry as small as 75 µm. Calma (CW), Beech House, London Road, Camberley, Sur-rey. Tel: (0276) 682021.

Durst adds

to range LESS than six months after entering the printer terminal acoustic covers market, Durst (UK) has turned its attention to silencing sheet-feed terminals.

The company is to add to its existing range of four acoustic covers a new model designed specifi-cally for sheet-feed printers. It is constructed in aluminium with hinged front covers in smoked

Durst (CW), Felstead Road, Longmead Industrial Estate, Epsom, Surrey, KT19 9AR. Telephone: Epsom 26262.



Two labels a second

A PORTABLE bar code label printer which could boost the use of bar codes has been introduced to the UK by the Swedish manu-

PRODUCTS

3D aid for

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visualisation

COUNTING House Computer Systems has enhanced its Integrated Technical System (ITS) to offer 3D viewing at the drafting stage of CAD/CAM applications for the more accurate visualisation

of projects.
It is often important to provide three dimensional views of a de-

sign even when this is not neces-

sary to the main drafting function.

The new 3D subsystem provides

the facilities necessary for the ITS

user to generate three dimensional

views from a 2 or 2.5 dimensional

drawing.

The resulting drawing can then be projected as any two or three

point perspective, or isometric and

monometric views with or without hidden lines. Views can be interac-

tively manipulated on the graphics screen and plotted when the user is

Any shape or profile in an exist-ing GDS drawing can be used as the basis of a perspective view.

Counting House Computer

Systems (CW), Fornham House, Forsham St Martin, Bury St Ed-munds, Suffolk. Tel (0284)

in the OK by the Swedish manufacturer Ecupan.

The Flexiprinter is said to be the first bar code label printer to use microprocessor technology. This easiles it to print different labels of various sizes on demand, so organisations do not have to order print runs well ahead of their needs.

seeds.
Several hundred label texts and formats can be stored in the Flexi-

plotting

Hai Computers (CW), Inviscible Road, Famborough, Hamo-Road, Newbury, Berkshire, Tel: (0252) 51715. (0633) 42421.



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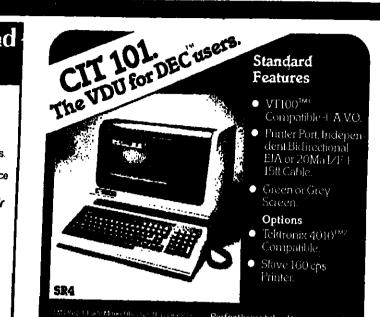
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NEW SOUTH WALES GOVERNMENT **DEPARTMENT OF** CORRECTIVE SERVICES **AUSTRALIA** Prisoner Records Computer Package Proposals are requested for a package covering a prisoner records and accommodation system for institutions operated by the Department of Corrective Services.

A user requirement statement has been prepared in respect of the Department's needs and this statement could be amended to facilitate appropriate packages. (A copy of this statement is available upon request.) Where necessary, Departmental organisational structure could also be modified to accommodate a successful proposal. The proposal should cover a complete software package and include a recommendation for suitable hardware. It is essential that the proposals be based on existing systems currently operational either within a gaol environment or a similar environment, which could be readily modified to meet the Department's needs.

Interested organisations are invited to discuss the matter further with the Department's information Services Branch, and appointments can be made with Mr E Manning or Mr R Coote on telephone (Australia) (02) 217 8125. Proposals should be clearly marked "Proposal for Computerised Records and Accommodation System", and be delivered by 25th March, 1983.

New South Wales Department of Corrective Services, information Services Branch, Roden Cutler House, 24 Campbell Street, SYDNEY, N.S.W. 2000. AUSTRALIA. OR: G.P.O. Box 31, SYDNEY, N.S.W. 2001. Telex: N.S.W. PREM, AA21269
Attention: N.S.W. Dept. Corrective Services

If you require further information in regard to this matter please contact Mr L. Gardner, Administrative Officer, Management Services, on 217 8316 or Mr E. Manning, information Services Branch, on 217 8126.

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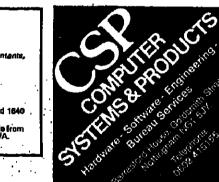
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mge space for this purpose can be excessive, especially for banks, and other businesses and institutions which need to dispose of vast quantities of confidential papers.

Now these offices can reduce their space reserved for waste, and at the same time safely destroy waste by shredding with the new Destroyit Shred'n Baler 6104 being introduced by Electric Wastebaske Con Theorem (62) Wastebasket Corp. This new office machine, designed for fast, safe disposal of office papers (including computer printouts), shreds, com-pacts, and bales automatically. The Destroyit Shred'n Baler is

simple to operate and takes no special skill. In addition to saving a claimed 75% of the space required for waste storage and providing greater document security, baling paper waste may lower insurance costs because of reduced fire hazards, and better, safer working

Additionally, pilferage is reduced because "good" merchandise can no longer be mixed with loose waste leaving the building. Total savings can be considerable.

The Destroyit Shred'n Baler 6104 shreds continuous forms at the speed of 71 feet per minute or 30 sheets per pass through its 16in throat. When the compacting chamber is full, a monitoring switch automatically shuts off the shredder and activates the hydraulic plunger which compacts the waste with four tons of

Electric Wastebasket Corp, (CW), 145 West 45th Street, New York, 10036.

Alternative for **IBM 3270** terminal users

to IBM's 3270 terminal from the user to suit different needs. group, Cable and Wireless. The variety of sizes and with a choice of company's trading subsidiary, Cable and Wireless UK Services, has launched the 5270 terminal Four- and seven-colour screens are made by a Canadian firm, Com- available.

screens and printers in any combination. The terminals are linked a trainute

COMPUTER printouts can create a paper handling problem and take up considerable space. For security's sake, this paper should be shredded prior to disposal, but storage space for this purpose can be 19,200 bits a secund are possible.

Communications speeds of up to 19,200 bits a second are possible under both IBM's BSC and SNA SDLC protocols.

Colour and black-and-white

displays can be mixed with a variety of printers without changes

IBM users now have an alternative—which can be changed easily by the

The terminals are available in a

The printers range in speed from 150 characters a second to The 5270 has the same functions as the 3270 but offers "considerable" enhancements. It consists of a controller, screens and printers. The controller can support 32 treat a printer attached in this way as an independent device.

Cable and Wireless UK Services is selling, installing and supporting the 5270s from its seven regional offices in the UK.

Market development manager Jim Ure said, "As we are not a manufacturer we can choose the best products. The Comterm 5270's ability to meet current user needs, plus its flexibility for future enhancement, ensures we can offer users a no-risk option irrespective of the direction their data proces-

sing takes."
Cable and Wireless UK Services (CW), 82-83 Blackfriars Road, London SEI 8HQ. Tel:



A variety of screen and printer alternatives from Cable and Wireless for IBM

Tiny terminal for £700

cost 401 Informer terminal. In line with the produce range's philosophy of "small is beautiful", the new 401 weighs only 14 lbs, yet offers a substantial cost-saving over competitors specialist terminals, says Geac. Prices start at £700.

Geac has adopted this competitive pricing policy on the 401 to 5235.

THE General Systems Division of increase its market share for Gesc UK has launched the low-cost 401 Informer terminal. In line

The base of the Informer 401



The Olympia ESW 3000 RO printer.

Printer links to 'any micro'

launched a low-cost, high speed daisywheel printer, the ESW 3000

Available at just over £1,100, it will interface with almost every microcomputer and word processor on sale, says Olympia.

The intelligent ESW 3000 RO prints bi-directionally at up to 50 to give correspondence quality reproduction at maximum speeds. Interfaces with Olympia's ESW range are currently available from the company for most other manufacturers' equipment. The range

OLYMPIA International has chps, with 10, 12, 15 and propor-launched a low-cost, high speed tional pitch selections. Its completely new print unit, ribbons and wwheels have been developed

Diablo 13-bit parallel.

A range of paper-handling of vices are also available.

Olympia Business Machins (CW), Olympia House, 19978 Old Marylebone Road, London NW1 5QS. Tel: 01-262 6788.

Operator strain reduced

THE Televideo 970 intelligent terminal is now available in the UK from microcomputer and terminal distributor Midlectron. The 970 is fully compatible with Digital Equipment's VT100 yet costs just under £900. It is claimed to have been designed specifically to cut

operator strain.

The terminal has X-On/X-Off or DTR communications protocols, with standard RS232C printer and computer interfaces, plus an RS422 or 20-milliamp current loop option. Full VT100 editing and other features are standard. The screen can display 24 lines of R0 or 122 characters.

80 or 132 characters.
The display is wider than that of the VT100 at 14 inches, It has a phosphor screen which can be tilted.

Midisetron (CW), Nottingbam Road, Belper, Derby. Tel: (077 382) 6811.



MA range of cabinets updated.

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SHANNON Datastor has updated its MA range of microform fling cabinets, introducing the unit dente combination of an anti-til dente has been supported by and "slam shut" drawers, he safety and convenience. Two as five drawer versions of the cabines have also been introduced to the

range.
Available with two, five, seen or 10 drawers, the lockable seel cabinets are finished in antelege brown and parchment. The brown are wider than those to drawers are wider than those to standard microform filing co-inets, also produced by Shanon Datastor, to allow more concerns storage of aperture cards and lar cassettes, including video or settes, as well as microfiche and the case of the cards and the case of the cards are the cards and the cards are cards as the cards are cards are cards are cards and the cards are cards are cards and the cards are cards are cards are cards and the cards are cards are cards and the cards are cards and the cards are cards are cards and the cards are cards and the cards are cards are cards and the cards are cards magnetic cards.

Shannon (CW), 36 Croydot Road, Beckenham, Kest 883 4BH. Telephone 01-650 4818.

MPI opts for 3in drive

MPI EUROPE, subaidiary of Micro Peripherals Inc, has released details of its latest ORM number of other ORM customer that of its physically larger countries the tradition of the Slimline which at only 2in high is currently the at only 2in high is currently the world's smallest 8in floppy disc drive, and the more recently an-nounced half-height 5 ¼ in drive, the company has now intro-duced a 3in drive which adopts the microfloppy standard originally proposed by Hitschi, Maxwell and Matsushita.

Matsushita.

MP1's chairman and chief executive officer, Ralph Gabsi, said on making the announcement, "After carefully researching what our customers require of a microfloppy, we concluded that the 3in design was the optimum choice.

"Our main criterion was to stipply a drive which would utilise an already available media rather than confuse the isaue by attempting the set a new standard without volume availability of a corresponding media. A further design criterion was that the new drive must have an interface which was fully compatible with standard 514 in drives."

MPI's 3in microfloppy diskette can fit easily into the pocket and its rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor applications. "The 3in microfloppy diskette can dits rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and microfloppy as a media are its self-cleaning capabilities and the automatic shutter which protects the recording by opening only when the disc has been safely inserted into the drive. Microfloppy diskette can dita rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor applications. "The 3in microfloppy diskette can dita rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor applications. "The 3in microfloppy diskette can dita rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor applications. "The 3in microfloppy diskette can dita rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor and its rigid casing makes it well able to withstand the rigours of everyday environments as offices, factories and standalone word processor and its rigid casing the pocket and its rigid casing

There are 40 tracks per the packed at 100 TPI and recording can be single or double density. media and a price less than that of a smiliar capacity half-height 5¼ in floppy disc drive.

Commenting further on the new drive, Chris Scotford, MPI Europe's sales manager, pointed out its suitability for personal computer and standalone word processor applications. "The 3in microfloppy diskette can fit easily into the pocket and its rigid casing makes it well able to withstand the

can be single or double density in These parameters translate in a range of capacities from 12 Kbytes to 500 Kbytes per minuted disc. Rotational speed is 300 ms which gives a maximum transfer rate of 250 Kbits 25 MPI has incorporated it patented stepper drive band not tioner technique resulting in track to track access time of sale 3mS; average access time is 55m

measures 3.5 in wide × high and the unit is only of deep. A one-step, push-butto door facilitates easy insertion and ejection of the disc and serves to protect the drive mechanism from

the ingress of dust.

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A thriving subsidiary of one of the world's largest companies in the petro-chemicals industry needs an additional member for its small development team. RPG il experience gained in an IBM GSD installation is required and every opportunity will be provided for the successful candidate to develop his or her ANALYSIS experience. A really excellent range of benefits is offered in addition to the basic salary. Speak to one of our LONDON-based consultants today.

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A national retailer requires an Analyst Programmer with three years' experience on DEC PDF 11 under RSTS/E. Some exposure to COBOL would be useful as would a knowledge of retail and commercial applications. Our client is also seeking two further PRO-GRAMMERS with a knowledge of BASIC +2 and RSTS/E. All three posts offer excellent opportunities to the right candidates. Call the LONDON office.

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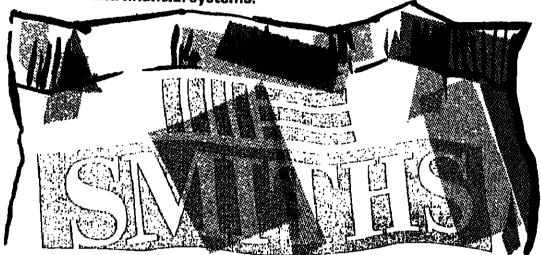
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Responsibilities will include: Software specification and development, on-going product support and some staff supervision. At least 4 years experience of Intel 8085 or similar assembler is required, plus knowledge of at least one high level language. An industrial, process control or communications background would be ideal.

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The position offers a challenging opportunity to work in an exciting new field of computer applications with a pioneering group which includes several companies employing computer technology.

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If you feel that you have the right qualifications for the post, please send a curriculum vitae to Mr. K. C. Quinton, Director of Research, Rediffusion Engineering, 187 Coombe Lane West, Kingston-upon-Thames, Surrey KT2 7DJ. All applications will be regarded as strictly confidential.



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ASSISTANT COUNTY TREASURER (Computer) COMPUTER SECTION, COUNTY HALL, EXETER Tel: 77977, Ext. 2472 returnable by 24th March, 1983.

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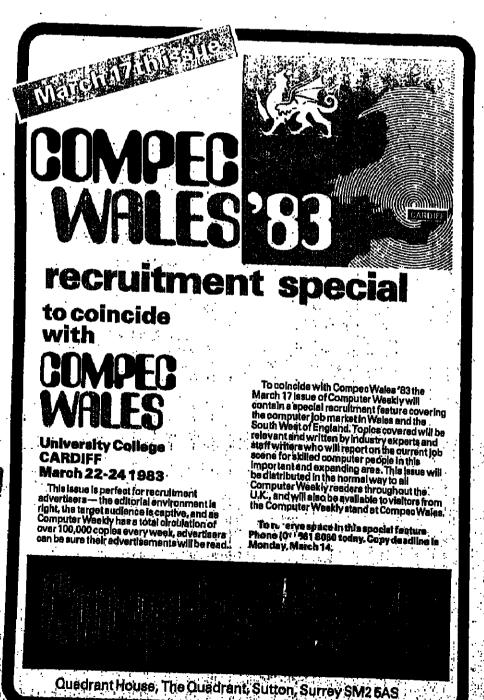
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+ car

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 be educated to degree level
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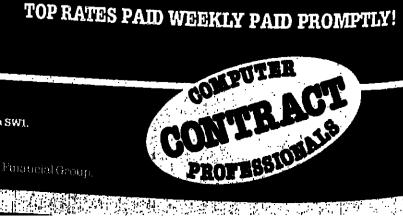
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(Development and Systems Support)

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IBM PROGRAMMERS

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however, other Honeywell experience will be considered. Perks are varied and include company product

System 34

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ICL ANALYST/PROGS £9.500

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Potential applicants wishing to have an informal discussion should contact Mr T. R. Layzell (Regional Tressurer) on Winchester 63511 EXT 388.

Application forms, job descriptions and other relevant information may be obtained from the Regional Head-quarters Personnel Officer, Highcroft, Romsey Road, Winchester, Hants. SO22 5DH. Telephone Winchester 63511 EXT 471.

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The project is being conducted according to the procedures of the Central Computer and Telecommunications Agency and the successful candidate must be able to offer a combunation of computer and management expertise that will add to the existing knowledge of Library staff. The Library requires a person who can offer some of the following:

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INTERNATIONAL RECRU

All Militer Printer and the Control of the Control

LANGUARIO POR ROPERTO DE STERVA POR P

111

COMPUTED WEEKLY March 16 1983 4

you, we are in a recession — even in the high-tech computer business. The evidence of the squeeze on company profits is shown by the number of companies toking number of companies taking prudent measures such as cancelling new plants, freezing wage increases and so on. Is this, then, the best time to change jobs?
The answer to that needs careful thought. Why not analyse the reasons for wanting a change in the

wanting a change in the first place? Remember, 1983 is a time of recession. The world of computer sales and marketing is now very different from that of the heady days when company turnovers and profits were growing rapidly, the market was ex-panding more quickly than existing companies could cope and new ventures grew on the surplus demand.

In those days jub opportunities were legion and fol-lowed a typical cyclic profile. Very often early ex-perience and training were gained with the larger com-panies which could afford the unproductive overhead of graduate trainces.

These young marketing people somer or later (although sometimes never) become productive and began to generate revenue.
After some two to four years
a number of things could

> The world of computer sales and marketing is now very different from that of the heady days when company turnovers and profits were growing rapidly, the market was expanding more quickly than existing companies could cope and new ventures grew on the surplus demand

came Temptation: If successful in the marketplace there was often a belief that the recently-trained were really exceptional and that better remuneration, benefits and manugement opportunities. ment opportunities were available elsewhere. The "c.£40,000 on-quota (realis-tic)" ads were their staple reading each week.

Then came Dissatisfac-

tion: If not so successful a degree of self-examination occurred which may well have culminated in a scanputers but I'm obviously not suited to selling them."

Then Resignation: Not the written type but just an inertia against doing anyning.
Then Reasoned Move:

Then Reasoned Move:
For any number of reasons,
but ideally well thought-our
responses to whatever personal aims needed satisfying. Included in this category could be a reasoned
change within the current
employer organization

change within the current employer organisation. Perhaps the only change was a more positive personal attitude to the existing job.

Looking through the "people on the move" columns reveals that a good deal of job changing, or even hopping, took place in those



people, smaller jobs in large companies led to larger jobs in small companies. Experience was at a

premium. There was a growing market fuelled by a fast growing demand and there seemed to be a collective belief that there was "enough business to go round". Healthy margins and/or good volume sales were the norm.

1983 is different. Times

are now tough for mar-keteers. The "deadly sins" look different in the new light. Now, for example, there is slower market

growth (obviously there are new market sectors which

are showing robust de-

sales and marketing reorganisations. In attempts to come to grips with a less expansionary market, man-agement changes branch structures, marketing divi-sions are amalgamated or split and reporting chains altered. Faced with this de-gree of change in a difficult marketing environment dimarketing environment dis-satisfaction is quite under-

satisfaction is quite under-standable. No company can guarantee a completely un-changing environment — business just is not like that and it would be a foolish person to expect it to be so. Then comes Resignation — summed up by "sit tight, times are tough". There is much to recommend this course because it sounds much to recommend this course because it sounds safe. But in that safe cocoon could lie a degree of danger born of a sense of fatalism. The catechism goes something like this: "Times are tough, there's more competition out there, more deals will be lost through 'dirty' tactics (eg discount) so I must expect not to do so

mand), but companies have been designed to run on continuing high market growth.

Old perceptions are not always valid. Whereas, for example, discount might have been offered as the final clincher on a deal it is now sometimes offered right, from the start for no good. must expect not to do so well." This reasoning, of course only leads one way -Then comes the Reasoned

Move: Most of the reasons for changing jobs underlying the "deadly sins" are perfectly valid; what is needed is the right frame of mind to mould them into a positive campaign of action which will result in the right kind of move. If a sensible change is being contem-Even the basic marketing psychology is under fire since potentially more sales will be lost in a more static market that an expanding one. That success breeds success if absolutely right, but what happens when successes are fewer and farther apart?

What do the 'deadly' sins' look like now?
Pirst comes Temptation: Relative success perhaps suffering a little in difficult times. As the fault cannot he "me" then it might be the products I sell, or the company image, or the price, So it is indeed tempting to investigate the "new and

unique'' product hardware, software or could also include a way out of any frozen earnings posi-tion. Yet what happens in one company today may happen at the company next-door tomorrow!

valid?

More money. Is it guaranteed? On-quota? Realisanteed? Then comes Dissatisfac-tion; Over the past year or so, the Press has carried a number of articles featuring tic? How many people in the organisation actually earned Bigger car. More taxl
Why not use your own and
claim against tax too?
Promotion. Besides en-

suring it is authentic, check on what strings may be at-

plated via answering job ads, rather than by enjoying the luxury of being "head-hunted" then what sort of

questions can be asked to check if the reasons are

Opportunity. Selling big-ger, smaller, unique, better — it's all relative. Look at the resources with which the company will back you.

Entrepreneurial zeal:
Your risk. Do or diel

These questions can all be classed as positive reasons behind a move. On the other behind a move. On the other hand, there are negative ones. Born of dissatisfactions with the current job the negatives could be feet of clay on which to base a job move which might affect the rest of your life.

At with a person's habits, a company's habits can be infuriating. So much so that resentment builds up day by day, small episode by little aggravation until finally drastic action is initiated in

However, in the same way as all people have habits which can infuriate (think when Holmes condescen-dingly said, "Elementary my dear Watson. Riementary in it is a matter of which company habits you can live with and which you cannot

In a way being employed does not sound too dissimitar to marriage! Just make sure you do not divorce too often for the wrong reasons.

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anderes supplyed the construction of the const



Recruiting the wrong person is more apparent in selling than in any other job because sales people are con-tinually measured by their

You can hide an inadequate clerk or a lazy secretary for as long as the inclination stays with you, but the failure of sales people stands out in the sales analysis like a punk rocker in the Stock Exchange.

Choosing the right people is much more than an intui-tive process. Even to be right most of the time is a creditable performance.

Having said all that, the hances of ever recruiting a sales team consisting enti-rely of "the right people," is virtually nil. There will al-ways be sales people with particular strengths and constructively exploited and offset.

sales manager to do.
So it follows that the more
he fails to recruit the right
people, the more work and
problems he creates for him-

Sales managers and salesmen slike often com-plein about the lack of effective sales training within their company as if to suggest that the absence of

sales success is due to a relatraining. I know it sounds unkind, but as the biblical adage declares, you can't make a silk purse out of a sow's car.

ways remain the wrong sales people. In this respect recruitment is more important than sales training — you've got to get it right from the very beginning.

The risk of simply getting the team up to full complement, rather than recruiting the right salesman for each job; must be avoided at all times.

PUZZLER

Get it right

NO experienced sales manager will argue against the suggestion that effective recruitment of sales people is one of the most important we call this the "superstar" elements of success. It is a job that has to be done correctly, not only because of the direct revenue implications of failure, but also be cause of the adverse effect decided to take their talent the wrong person can have upon the sales team. Shooting for perfection is

a reasonable starting point, but a naive objective, if you can get most of the skills, experience and human characteristics you want, settle Of course, this begs the question: which skills are

most important - product, industry, applications or selling? Well, there's no easy answer to that; it depends very much on the product.

Some companies sell "so-

self. The former un-

ity to speak the buyer's language and understand his business if the problem is to

be identified and the appro-

priate solution proposed

However, as a general rule, it is a much easier and

shorter process to give

people product knowledge than to teach them to sell.

In my opinion, the pro-duct has to be very technical

and the market extremely specialised before such

knowledge can be giver

greater than or even equal importance to established

selling skills.
The claim that good

talesmen are made, rather than born, is a piece of overstated propaganda, which probably emanates from those organisations

which have something to

gain by providing the neces-say training. This does not mean that good salesmen can sell anything; there are definitely "horses for courses." Star performance

in selling carbon paper does not guarantee similar suc-

cess in supercomputers.

The very existence of sales management (as op-posed to marketing manage-ment) as a job function, must to a considerable de-gree be due to the unlikeli-hood of ever recruiting a team entirely composed of ideal sales people. Surely the only reason a

sales manager needs the ability to motivate and organise his team, is because his people have insufficient capability to make and organise themselves. If a team ganise themselves. If a team could be entirely made up of the perfect sales people, there would be little for the

Selecting the wrong people cannot be recovered by providing them with re-medial sales training. The wrong sales people will al-ways remain the wrong sales

times.

Ideally, a salesman not only has a substantial record of sales success, but also ex-

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Many other factors such as the duration of selling cycle, exposure to strategic selling, multiplicity and level of contact, educational background, intellectual ca-pability, etc, have to be

That is why a job speci-fication and a candidate profile is an essential poir of initiation for the recrui ment process.

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